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2006

# Virginia Commonwealth University Graduate Bulletin

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# **VCU** Bulletin

## Graduate and Professional Programs

Monroe Park and MCV Campuses

July 2006

Virginia Commonwealth University is an equal opportunity, affirmative action university providing access to education and employment without regard to age, race, color, national origin, gender, religion, sexual orientation, veteran's status, political affiliation or disability.

Virginia Commonwealth University is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award baccalaureate, master's, doctoral and first professional degrees.

# Virginia Commonwealth University

Virginia Commonwealth University is a state-supported institution with an enrollment of more than 26,000 undergraduate, graduate and health professions students studying in 11 schools and one college on its two campuses in Richmond, Va. The MCV Campus is located near the financial, governmental and shopping areas of downtown Richmond; the Monroe Park Campus is two miles west in Richmond's historic Fan District, a residential area which dates from the 19th century.

The university takes its founding date as 1838, the year that the Medical College of Virginia was created as the medical department of Hampden-Sydney College. MCV became an independent institution in 1854 and state-supported in 1860.

VCU's Monroe Park Campus was the former Richmond School of Social Work and Public Health, established in 1917. In 1925, it became the Richmond Division of the College of William and Mary; in 1939 its name was changed to the Richmond Professional Institute of the College of William and Mary, from which it separated in 1962 to become an independent state institution. In 1968, MCV and RPI merged to form VCU.

VCU enrolls a diverse student body. The university's level of funded research ranks it as a Carnegie Doctoral/Research University-Extensive, placing it among the top 100 research universities in the country. The VCU faculty, representing the finest American and international graduate institutions, enhances VCU's position as among the important institutions of higher learning in the United States via their work in the classroom, laboratory, studio, clinic and as published in scholarly journals. VCU maintains active communications with its growing cadre of alumni and enjoys a cooperative and stimulating relationship with the city of Richmond, which encompasses the arts, the business community, the architectural community and local government.

VCU's location in historic Richmond affords its students the benefits of living in one of the South's most cosmopolitan cities. Located in central Virginia, Richmond is a two-hour drive from the Atlantic seashore to the east, Appalachian Mountains recreational sites to the west, and Washington, D.C. to the north. A wide range of cultural, educational and recreational facilities and activities is available in the Richmond area, including a full performance schedule at VCU's own Performing Arts Center.

## Administration

VCU administration provides leadership and organizational structure for the university, overseeing its goals and mission. Refer to each [unit's Web site](#) for a current listing of administrators.

## Deans

Deans provide leadership for their respective school or college. Refer to each [unit's Web site](#) for a current listing of its deans, departmental chairs and program heads.

## Accreditation

Virginia Commonwealth University is accredited by the Commission on Colleges of the Southern Association of Colleges and Schools to award baccalaureate, master's, doctoral and first professional degrees. SACS is located at 1866 Southern Lane, Decatur, GA 30033; telephone: (404) 679-4500.

## Academic program accreditation

See the college/schools for detailed information about program accreditation.

## Specialized program accreditation or certification

### Campus Police

Police Academy  
Certified by the Virginia Department of Criminal Justice Services

### Division of Student Affairs and Enrollment Services

University Counseling Services  
American Psychological Association

Student Health Services  
Joint Commission on Accreditation of Health Care Organizations

### Hospital accreditation

VCU Health System  
Joint Commission on Accreditation of Health Care Organizations

### Hospital accreditation

VCU Health System  
Joint Commission on Accreditation of Health Care Organizations

## Mission of VCU

VCU is a public, urban, research university, supported by the commonwealth of Virginia to serve the people of the commonwealth and the nation. The university provides a fertile and stimulating environment for learning, teaching, research, creative expression and public service. Essential to the life of the university is a faculty actively engaged in scholarship and creative exploration activities that increase knowledge and understanding of the world, and inspire and enrich teaching.

The university is dedicated to educating full- and part-time students of all ages and diverse backgrounds in an atmosphere of free inquiry and scholarship, so they may realize their full potential as informed, productive citizens with a lifelong commitment to learning and service.

The university serves the local, state, national and international communities through its scholarly activities, its diverse educational programs and its public service activities. As an institution of higher learning in a metropolitan center that also is the capital of the commonwealth, the university enjoys unique resources that enrich its programs and offer special opportunities for contributing its intellectual and creative expertise in the development of innovative approaches to meet the changing needs of our society.

The goals of VCU in carrying out its mission are to:

- provide undergraduate education that includes a broad and rigorous foundation in the arts, sciences and humanities, and explores the ideas and values of humankind,
- offer nationally and internationally recognized professional and graduate programs leading to doctoral, master's, and other terminal and advanced degrees in the professions, the sciences, the humanities and the arts,
- foster a scholarly climate that inspires creativity, a free and open

exchange of ideas, critical thinking, intellectual curiosity, freedom of expression and intellectual integrity,

- expand the boundaries of knowledge and understanding through research, scholarship and creative expression in the sciences, arts, humanities and the professional disciplines,
- value and promote racial and cultural diversity in its student body, faculty, administration and staff to enhance and enrich the university,
- develop and sustain a faculty of the highest quality by providing an environment conducive to their achieving and maintaining national and international stature and by continuing to attract both recognized scholars and outstanding individuals with a high potential for scholarly achievement and excellence in teaching,
- provide an optimal environment for educating and training health care professionals, for conducting research to improve health care and delivery, and for meeting the needs of patients and the community in a comprehensive health care setting,
- use the urban environment as a laboratory for studying and developing new approaches to problems pertaining to the public and private sectors,
- support, through its commitment to public exhibitions, performances and other cultural activities, the imaginative power of the liberal, visual and performing arts to express the problems and aspirations of humanity and to enrich the lives of individuals,
- develop innovative programs for continuing education that establish permanent intellectual connections between the university and its constituents, enhance professional competence and promote dialogue on public issues,
- offer diverse opportunities for individuals to benefit from higher education through a variety of avenues to include flexible scheduling for part-time undergraduate and graduate students, open admission for nondegree-seeking students with appropriate preparation, advanced degree programs for working professionals, selected programs in diverse locales, admission for graduates with appropriate associate degrees of arts or sciences and support programs for specially admitted students,
- promote interdisciplinary studies within the university to bring new perspectives to bear on complex problems, and
- mobilize its creative energies and its expertise to meet the needs of society and individuals in its unique role as Virginia's major urban university.

### VCU Medical Center Mission

The VCU Medical Center is an integral part of VCU. The five academic schools and teaching hospitals of the MCV Campus serve the needs of the citizens of Virginia for:

- transmission of knowledge related to health services,
- continuity in the supply of health care professionals,
- accessibility to comprehensive and quality health care services,
- development and dissemination of new knowledge for the advancement of the health sciences.

The VCU Medical Center is committed to educational programs directed toward meeting the state's health needs. Programs are dedicated to maintaining and updating the competency of health professionals as well as preparing graduates to enter the health professions. Educational programs are supported by several academic disciplines, the teaching hospital, carefully selected off-campus health facilities and an institutional commitment to effective teaching.

The VCU Medical Center also is committed to a comprehensive program of patient care: to demonstrate excellence in practice as a model for students, to provide a base of study designed to improve patient care, to meet the needs of patients in its hospital's service area and to offer highly specialized services in clinical areas of demonstrated expertise.

The VCU Medical Center's research programs are designed to develop new knowledge in areas ranging from the molecular level through clinical procedures to health care delivery and outcomes. Their goal is to serve as a model for students in the spirit of inquiry and the application of the scientific process to patient care, and to focus interdisciplinary effort on problems amenable to the scientific approach.

### Oak Ridge Associated Universities Consortium

Since 1963, students and faculty of VCU have benefited from its membership in Oak Ridge Associated Universities (ORAU). ORAU is a consortium of 87 colleges and universities and a contractor for the U.S. Department of Energy (DOE) located in Oak Ridge, Tenn. ORAU works with its member institutions to help their students and faculty gain access to federal research facilities throughout the country, to keep its members informed about opportunities for fellowship, scholarship and research appointments and to organize research alliances among its members.

Through the Oak Ridge Institute for Science and Education, the DOE facility that ORAU operates, undergraduates, graduates, postgraduates as well as faculty enjoy access to a multitude of opportunities for study and research. Students can participate in programs covering a wide variety of disciplines including business, earth sciences, epidemiology, engineering, physics, geological sciences, pharmacology, ocean sciences, biomedical sciences, nuclear chemistry and mathematics. Appointment and program length range from one month to four years. Many of these programs are especially designed to increase the numbers of underrepresented minority students pursuing degrees in science- and engineering-related disciplines. A comprehensive listing of these programs and other opportunities, their disciplines and details on locations and benefits can be found on the ORISE Web site at <http://www.ornl.gov/orise.htm> or by calling either of the contacts listed below.

ORAU's Office of Partnership Development seeks opportunities for partnerships and alliances among ORAU's members, private industry and major federal facilities. Activities include faculty development programs such as the Ralph E. Powe Jr. Faculty Enhancement Awards, the Visiting Industrial Scientist Award and various services to chief research officers.

For more information about ORAU and its programs, contact:

Dr. Marsha Torr, ORAU Councilor for VCU  
(804) 828-0732  
Ms. Monnie E. Champion, ORAU Corporate Secretary  
(865) 576-3306  
or visit the ORAU Web site at <http://www.ornl.gov>

### VCU Health System

In April 1996, Gov. George Allen signed a bill that officially transferred the operations, employees and obligations of the Medical College of Virginia Hospitals to the Medical College of Virginia Hospitals Authority. This transfer occurred on June 30, 1997.

The authority assumes the obligations of MCVH as well as the mission of operating the MCV Hospitals as teaching hospitals for the benefit of the schools of the Health Sciences Division of VCU, and of providing high quality patient care and a site for medical and biomedical research in close affiliation with the Health Sciences Division of VCU.

In winter 2000, the Virginia General Assembly and Gov. James Gilmore authorized the establishment of the Virginia Commonwealth University Health System Authority. This legislation modified the existing MCV Hospitals Authority by integrating the clinical missions of MCV Hospitals, MCV Physicians and the School of Medicine.

## Board of Visitors

The Board of Visitors is the voting body of Virginia Commonwealth University. Each year, the governor of Virginia appoints members. Refer to [Office of the President's Web site](#) for a current listing of board members.

## Determination of student classification for in-state tuition purposes

Section 23-7.4, of the Code of Virginia, governs eligibility for in-state tuition. Effective for students enrolling on or after July 1, 1996, the statute provides:

### § 23-7.4. Eligibility for in-state tuition charges. –

1. For purposes of this section and §§ 23-7.4:1, 23-7.4:2 and 23-7.4:3, the following definitions shall apply:

"Date of the alleged entitlement" means the first official day of class within the term, semester or quarter of the student's program.

"Dependent student" means one who is listed as a dependent on the federal or state income tax return of his parents or legal guardian or who receives substantial financial support from his spouse, parents or legal guardian. It shall be presumed that a student under the age of twenty-four on the date of the alleged entitlement receives substantial financial support from his parents or legal guardian, and therefore is dependent on his parents or legal guardian, unless the student (i) is a veteran or an active duty member of the U.S. Armed Forces; (ii) is a graduate or professional student; (iii) is married; (iv) is a ward of the court or was a ward of the court until age 18; (v) has no adoptive or legal guardian when both parents are deceased; (vi) has legal dependents other than a spouse; or (vii) is able to present clear and convincing evidence that he is financially self-sufficient.

"Domicile" means the present, fixed home of an individual to which he returns following temporary absences and at which he intends to stay indefinitely. No individual may have more than one domicile at a time. Domicile, once established, shall not be affected by mere transient or temporary physical presence in another jurisdiction.

"Domiciliary intent" means present intent to remain indefinitely.

"Emancipated minor" means a student under the age of eighteen on the date of the alleged entitlement whose parents or guardians have surrendered the right to his care, custody and earnings and who no longer claim him as a dependent for tax purposes.

"Full-time employment" means employment resulting in, at least, an annual earned income reported for tax purposes equivalent to fifty work weeks of forty hours at minimum wage.

"Independent student" means one whose parents have surrendered the right to his care, custody and earnings, do not claim him as a dependent on federal or state income tax returns, and have ceased to provide him substantial financial support.

"Special arrangement contract" means a contract between a Virginia employer or the authorities controlling a federal installation or agency located in Virginia and a public institution of higher education for reduced rate tuition charges as described § 23-7.4:2 G.

"Substantial financial support" means financial support in an amount which equals or exceeds that required to qualify the individual to be listed as a dependent on federal and state income tax returns.

"Unemancipated minor" means a student under the age of eighteen on the date of the alleged entitlement who is under the legal control of and is financially supported by either of his parents, legal guardian or other person having legal custody.

"Virginia employer" means any employing unit organized under the laws of Virginia or having income from Virginia sources regardless of its organizational structure, or any public or nonprofit organization authorized to operate in Virginia.

2. To become eligible for in-state tuition, an independent student shall establish by clear and convincing evidence that for a period of at least one year immediately prior to the date of the alleged entitlement, he was domiciled in Virginia and had abandoned any previous domicile, if such existed.

To become eligible for in-state tuition, a dependent student or unemancipated minor shall establish by clear and convincing evidence that for a period of at least one year prior to the date of the alleged entitlement, the person through whom he claims eligibility was domiciled in Virginia and had abandoned any previous domicile, if such existed. If the person through whom the dependent student or unemancipated minor established such domicile and eligibility for in-state tuition abandons his Virginia domicile, the dependent student or unemancipated minor shall be entitled to such in-state tuition for one year from the date of such abandonment.

In determining domiciliary intent, all of the following applicable factors shall be considered: continuous residence for at least one year prior to the date of alleged entitlement, state to which income taxes are filed or paid, driver's license, motor vehicle registration, voter registration, employment, property ownership, sources of financial support, military records, a written offer and acceptance of employment following graduation, and any other social or economic relationships with the Commonwealth and other jurisdictions.

Domiciliary status shall not ordinarily be conferred by the performance of acts which are auxiliary to fulfilling educational objectives or are required or routinely performed by temporary residents of the Commonwealth. Mere physical presence or residence primarily for educational purposes shall not confer domiciliary status. A matriculating student who has entered an institution and is classified as an out-of-state student shall be required to rebut by clear and convincing evidence the presumption that he is in the Commonwealth for the purpose of attending school and not as a bona fide domiciliary.

Those factors presented in support of entitlement to in-state tuition shall have existed for the one-year period prior to the date of the alleged entitlement. However, in determining the domiciliary intent of active duty military personnel residing in the Commonwealth, or the domiciliary intent of their dependent spouse or children who claim domicile through them, who voluntarily elect to establish Virginia as their permanent residence for domiciliary purposes, the requirement of one year shall be waived if all other conditions for establishing domicile are satisfied.

3. A married person may establish domicile in the same manner as an unmarried person. An emancipated minor may establish domicile in the same manner as any other independent student. A nonmilitary student whose parent or spouse is a member of the armed forces may establish domicile in the same manner as any other student.

Any alien holding an immigration visa or classified as a political refugee shall also establish eligibility for in-state tuition in the same manner as any other student. However, absent congressional intent to the contrary, any person holding a student or other temporary visa shall not have the capacity to intend to remain in Virginia indefinitely and, therefore, shall be ineligible for Virginia domicile and for in-state tuition charges.

The domicile of a dependent student shall be rebuttably presumed to be the domicile of the parent or legal guardian claiming him as an exemption on federal or state income tax returns currently and for the tax year prior to the date of the alleged entitlement or providing him substantial financial support.

For the purposes of this section, the domicile of an unemancipated minor or a dependent student eighteen years of age or older may be either the domicile of the parent with whom he resides, the parent who claims the student as a dependent for federal and Virginia income tax purposes for the tax year prior to the date of the alleged entitlement and is currently so claiming the student, or the parent who provides the student substantial financial support. If there is no surviving parent or the whereabouts of the parents are unknown, then the domicile of an unemancipated minor shall be the domicile of the legal guardian of such unemancipated minor unless there are circumstances indicating that such guardianship was created primarily for the purpose of conferring a Virginia domicile on the unemancipated minor.

4. It is incumbent on the student to apply for change in domiciliary status on becoming eligible for such change. Changes in domiciliary status shall only be granted prospectively from the date such application is received.

A student who knowingly provides erroneous information in an attempt to evade payment of out-of-state fees shall be charged out-of-state tuition fees for each term, semester or quarter attended and may be subject to dismissal from the institution. All disputes related to the veracity of information provided to establish Virginia domicile shall be appealable through the due process procedure required by § 23-7.4:3. (1984, c. 422; 1985, cc. 179, 572; 1988, c. 124; 1989, c. 371; 1990, c. 680; 1991, c. 590; 1996, cc. 931, 981; 1999, c. 439.)

**The 1996 amendments.** – The 1996 amendments by cc. 931 and 981 are identical, and rewrote this section.

**§ 23-7.4:1. Waiver of tuition and required fees for certain students. –**

1.
  1. All sums appropriated by law for the purpose of effecting the provisions of this subsection shall be used for the sole purpose of providing for free tuition and required fees at the state-supported institutions and institutional charges, general or college fees, or any charges by whatever term referred to, board and room rent, and books and supplies at any education or training institution of collegiate or secondary grade in the Commonwealth of Virginia approved in writing by the Director of the Department of Veterans' Affairs for the use and benefit of the children not under sixteen and not over twenty-five years of age either of whose parents was killed in action, is missing in action or a prisoner of war in any armed conflict subsequent to December 6, 1941, while serving in the Army, Navy, Marine Corps, Air Force or Coast Guard of the United States, or was or is or may hereafter become totally and permanently disabled due to service during such periods if such parent (i) was a citizen of Virginia at the time of entering such service; (ii) is and has been, for at least five years immediately prior to the date on which application was submitted by or on behalf of such child for admission to any education or training institution of collegiate or secondary grade in this Commonwealth, a citizen of Virginia; (iii) is deceased, was a citizen of Virginia on the date of his or her death and had been a citizen of Virginia for at least five years immediately prior to his or her death; or (iv) is deceased and the surviving parent had been, at some time previous to marrying the deceased parent, a citizen of Virginia for at least five years and is and has been a citizen of Virginia for at least five years immediately prior to the date on which application was submitted by or on behalf of such child for admission to any education or training institution of collegiate or secondary grade in this Commonwealth.
  2. Such children, upon recommendation of the Director of the Department of Veterans' Affairs, shall be admitted to state institutions of secondary or higher education, free of tuition and all required fees. Each state-supported institution shall include in its catalogue or equivalent publication a statement describing the benefits provided by this subsection.
  3. The amounts that may be or may become due by reason of attendance at any such educational or training institution, not in excess of the amount specified in subdivision 5, shall be payable on vouchers approved by the Director of the Department of Veterans' Affairs.
  4. The Director of the Department of Veterans' Affairs shall determine the eligibility of the children who may make application for the benefits provided for in this subsection and shall satisfy himself of the attendance and satisfactory progress of such children at such institution and of the accuracy of the charge or charges submitted on account of the attendance of any such children at any such institution. However, neither the Director nor any employee of the Department of Veterans' Affairs shall receive any compensation for such services.
  5. To carry out the provisions of this subsection, there may be expended such funds as shall be appropriated for the purpose in the general appropriation acts. However, the maximum amount to be expended for each such child shall not be more, when combined with any federal allowance which may be made for such tuition, charges, fees, rent, books and supplies, than the actual amount of the benefits provided for in this subsection.

6. For the purposes of this subsection, user fees, such as room and board charges, shall not be included in this authorization to waive tuition and fees. However, all required fees, educational and auxiliary, shall be waived along with tuition.
2. Any child between the ages of sixteen and twenty-five whose parent or any person whose spouse has been killed in the line of duty while employed or serving as a law-enforcement officer, firefighter, including a special forest warden designated pursuant to §10.1-1135, member of a rescue squad, sworn law-enforcement officer, special agent of the Department of Alcoholic Beverage Control, state correctional, regional or local jail officer, regional jail or jail farm superintendent, sheriff, deputy sheriff, or member of the Virginia National Guard while such member is serving in the Virginia National Guard or as a member of the United States Armed Forces, shall be entitled to free undergraduate tuition and required fees at any public institution of higher education in Virginia under the following conditions:
  1. The chief administrative officer of the Alcoholic Beverage Control Board, emergency medical services agency, law-enforcement agency, or other appropriate agency or the Superintendent of State Police certifies that the deceased parent or spouse was employed or serving as a law-enforcement officer or a firefighter, including a special forest warden pursuant to §10.1-1135, or member of a rescue squad or in any other capacity as specified in this section and was killed in the line of duty while serving or living in the Commonwealth; and
  2. The child or spouse shall have been offered admission to a public institution of higher education. Any child or spouse who believes he is eligible shall apply to the public institution of higher education to which he has been admitted for the benefits provided by this subsection. The institution shall determine the eligibility of the applicant for these benefits and shall also ascertain that the recipients are in attendance and are making satisfactory progress. The amounts payable for tuition and required fees for the applicants shall be waived by the institution accepting the students.

For the purposes of this subsection, user fees, such as room and board charges, shall not be included in this authorization to waive tuition and fees. However, all required fees, educational and auxiliary, shall be waived along with tuition.

3. Senior citizens shall be entitled to free tuition and required fees pursuant to the provisions of Chapter 4.5 (§ 23-38.54 et seq.) of Title 23.
4. Tuition and required fees may be waived for a student from a foreign country enrolled in a public institution of higher education through a student exchange program approved by such institution, provided the number of foreign students does not exceed the number of students paying full tuition and required fees to the institution under the provisions of the exchange program for a given three-year period. (1996, cc. 931, 981; 1998, c. 377; 2001, c. 330.)

**§ 23-7.4:2. Eligibility for in-state or reduced tuition for students not domiciled in Virginia; tuition grants for members of the National Guard of the Commonwealth of Virginia. –**

1. A nonmilitary student whose parent or spouse is a member of the armed forces may establish domicile in the same manner as any other student. However, a nonmilitary student, not otherwise eligible for in-state tuition, whose parent or spouse is a member of the military

residing in the Commonwealth pursuant to military orders and claiming a state other than Virginia on their State of Legal Residence Certificate, shall be entitled to in-state tuition charges when the following conditions are met: (i) if the student is a child of a member of the armed forces, then the nonmilitary parent shall have, for at least one year immediately prior to the date of alleged entitlement for in-state tuition charges, resided in Virginia, been employed full time and paid individual income taxes to Virginia. Such student shall be eligible for in-state tuition charges only if the nonmilitary parent claims him as a dependent for Virginia and federal income tax purposes, as evidenced by claiming him as a dependent on an individual or joint return; or (ii) if the student is the spouse of a member of the armed forces, then such student shall have, for at least one year immediately prior to the date of alleged entitlement for in-state tuition, resided in Virginia, been employed full time and paid individual income taxes to Virginia; or (iii) if the student is the child or the spouse of a member of the armed forces, then the student shall be entitled to in-state tuition charges for a maximum of one year during the period that the military parent or spouse is residing in the Commonwealth. Any student whose spouse or parent is a member of the armed forces shall be eligible for in-state tuition charges for so long as the conditions of clauses (i) and (ii) of this subsection continue to be met. Military dependents provided in-state tuition for one year during the period the military parent or spouse is residing in Virginia shall be counted as out-of-state students for admissions, enrollment and tuition and fee revenue policy purposes. **(Note: § 23-7.4:2 (A)(iii) of the code of Virginia which grants one year in-state tuition to the spouse and children of military personnel has been suspended since the 1994-1996 biennium by § 4-2.01(b)(4) of the appropriation act. Military members are not able to receive any benefit outlined in this section until the suspension period ends.)**

2. Students who live outside this Commonwealth and have been employed full time inside Virginia for at least one year immediately prior to the date of the alleged entitlement for in-state tuition shall be eligible for in-state tuition charges if such student has paid Virginia income taxes on all taxable income earned in this Commonwealth for the tax year prior to the date of the alleged entitlement. Students claimed as dependents for federal and Virginia income tax purposes who live outside this Commonwealth shall become eligible for in-state tuition charges if the nonresident parents claiming them as dependents have been employed full time inside Virginia for at least one year immediately prior to the date of the alleged entitlement and paid Virginia income taxes on all taxable income earned in this Commonwealth for the tax year prior to the date of the alleged entitlement. Such students shall continue to be eligible for in-state tuition charges for so long as they or their qualifying parent is employed full time in Virginia, paying Virginia income taxes on all taxable income earned in this Commonwealth and the student is claimed as a dependent for Virginia and federal income tax purposes.
3. Any person who (i) is a member of the National Guard of the Commonwealth of Virginia and has a minimum remaining obligation of two years, (ii) has satisfactorily completed required initial active duty service, (iii) is satisfactorily performing duty in accordance with regulations of the National Guard, and (iv) is enrolled in any state institution of higher education, any private, accredited and nonprofit institution of higher education in the Commonwealth whose primary purpose is to provide collegiate or graduate education and not to provide religious training or theological education, any course or program offered by any such institution or any public career and



technical school shall be eligible for a grant in the amount of the difference between the full cost of tuition and any other educational benefits for which he is eligible as a member of the National Guard. Application for a grant shall be made to the Department of Military Affairs. Grants shall be awarded from funds available for the purpose by such Department.

4. Notwithstanding the provisions of § 23-7.4 or any other provision of the law to the contrary, the governing board of any state institution of higher education or the governing board of the Virginia Community College System may charge the same tuition as is charged to any person domiciled in Virginia pursuant to the provisions of § 23-7.4 to:
  1. Any person enrolled in one of the institution's programs designated by the State Council of Higher Education who is domiciled in and is entitled to reduced tuition charges in the institutions of higher learning in any state which is a party to the Southern Regional Education Compact which has similar reciprocal provisions for persons domiciled in Virginia;
  2. Any student from a foreign country who is enrolled in a foreign exchange program approved by the state institution during the same period that an exchange student from the same state institution, who is entitled to in-state tuition pursuant to § 23-7.4, is attending the foreign institution; and
  3. Any high school or magnet school student, not otherwise qualified for in-state tuition, who is enrolled in courses specifically designed as part of the high school or magnet school curriculum in a community college for which he may, upon successful completion, receive high school and community college credit pursuant to a dual enrollment agreement between the high school or magnet school and the community college.
5. The governing board of the Virginia Community College System may charge reduced tuition to any person enrolled in one of the System's institutions who lives within a thirty-mile radius of a Virginia institution, is domiciled in, and is entitled to in-state tuition charges in the institutions of higher learning in any state which is contiguous to Virginia and which has similar reciprocal provisions for persons domiciled in Virginia.
6. The advisory board of the University of Virginia's College at Wise and the board of visitors of the University of Virginia may charge reduced tuition to any person enrolled at the University of Virginia's College at Wise who lives within a fifty-mile radius of the University of Virginia's College at Wise, is domiciled in, and is entitled to in-state tuition charges in the institutions of higher learning in Kentucky, if Kentucky has similar reciprocal provisions for persons domiciled in Virginia.

Any out-of-state students granted in-state tuition pursuant to this subsection and subsection E shall be counted as out-of-state students for the purposes of determining admissions, enrollment, and tuition and fee revenue policies.

7. Public institutions of higher education may enter into special arrangement contracts with Virginia employers or authorities controlling federal installations or agencies located in Virginia. The special arrangement contracts shall be for the purpose of providing reduced rate tuition charges for the employees of the Virginia employers or federal personnel when the employers or federal authorities are assuming the liability for paying, to the extent permitted by federal law, the tuition for the employees or personnel in question and the employees or personnel are classified by the requirements of

this section as out-of-state.

Special arrangement contracts with Virginia employers or federal installations or agencies may be for group instruction in facilities provided by the employer or federal authority or in the institution's facilities or on a student-by-student basis for specific employment-related programs.

Special arrangement contracts shall be valid for a period not to exceed two years and shall be reviewed for legal sufficiency by the Office of the Attorney General prior to signing. All rates agreed to by the public institutions shall be at least equal to in-state tuition and shall only be granted by the institution with which the employer or the federal authorities have a valid contract for students for whom the employer or federal authorities are paying the tuition charges.

All special arrangement contracts with authorities controlling federal installations or agencies shall include a specific number of students to be served at reduced rates. Nothing in this subsection shall change the domiciliary status of any student for the purposes of enrollment reporting or calculating the proportions of general funds and tuition and fees contributed to the cost of education. (1996, cc. 931, 981; 1998, cc. 62, 79; 1999, cc. 424, 437; 2000, c. 196; 2001, c. 483.)

#### **§ 23-7.4.3. Determinations of eligibility; appeals and guidelines. –**

1. Each public institution of higher education shall establish an appeals process for those students who are aggrieved by decisions regarding eligibility for in-state or reduced tuition charges pursuant to §§ 23-7.4 and 23-7.4.2. The Administrative Process Act (§ 2.2-4000 et seq.) shall not apply to these administrative reviews.

An initial determination shall be made. Each appeals process shall include an intermediate review of the initial determination and a final administrative review. The final administrative decision shall be in writing. A copy of this decision shall be sent to the student. Either the intermediate review or the final administrative review shall be conducted by an appeals committee consisting of an odd number of members. No person who serves at one level of this appeals process shall be eligible to serve at any other level of this review. All such due process procedures shall be in writing and shall include time limitations in order to provide for orderly and timely resolutions of all disputes.

Any party aggrieved by a final administrative decision shall have the right to review in the circuit court for the jurisdiction in which the relevant institution is located. A petition for review of the final administrative decision shall be filed within thirty days of receiving the written decision. In any such action, the institution shall forward the record to the court, whose function shall be only to determine whether the decision reached by the institution could reasonably be said, on the basis of the record, not to be arbitrary, capricious or otherwise contrary to law.

2. To ensure the application of uniform criteria in administering this section and determining eligibility for in-state tuition charges, the State Council of Higher Education shall issue and from time to time revise guidelines, including domiciliary status questions to be incorporated by all state institutions of higher education in their admissions applications. These guidelines shall not be subject to the Administrative Process Act.

An advisory committee, composed of at least ten representatives of institutions of higher education, shall be appointed by the Council each year to cooperate with the Council in developing the guidelines for determining eligibility or revisions thereof. The Council shall consult with the Office of the Attorney General and provide opportunity for public comment prior to issuing any such guidelines. (1996, cc. 931, 981.)

**§ 23-7.4:4. Reduction in tuition and fees charged; in-state undergraduates. –**

It is the intent of the General Assembly that the Commonwealth of Virginia make available to its citizens an affordable college education. Therefore, notwithstanding any provision of law to the contrary, the governing body of each institution of higher education shall reduce the tuition and mandatory educational and general fees in effect on June 30, 1999, for in-state undergraduate students by twenty percent for the year beginning July 1, 1999, and ending June 30, 2000. Following such reduction, the Governor shall include, in each budget submitted to the General Assembly pursuant to § 2.2-1509, sufficient funds to reimburse each public institution of higher education for such tuition and mandatory fees reduced pursuant to this section. (1999, c. 1042.)

**§ 23-7.4:5. Grant for tuition and fees for certain individuals. –**

1. The payment of tuition or fees, except fees established for the purpose of paying for course materials, such as laboratory fees, shall be provided for a person who is a bona fide domiciliary of Virginia, as defined in § 23-7.4, and who:
  1. Has received a high school diploma or a general educational development (GED) certificate and was in foster care or in the custody of the Department of Social Services or is considered a special needs adoption at the time such diploma or certificate was awarded;
  2. Is enrolled or has been accepted for enrollment as a full-time student in a degree or certificate program of at least one academic year in length in a public two-year institution of higher education in the Commonwealth;
  3. Has not been enrolled in postsecondary education as a full-time student for more than five years;
  4. Maintains the required grade point average established by the State Board for Community Colleges;
  5. Has submitted applications for federal student financial aid programs for which he may be eligible; and
  6. Meets any additional financial need requirements established by the State Board for Community Colleges for the purposes of such grant.
2. The State Board for Community Colleges, in consultation with the State Council of Higher Education and the Department of Social Services, shall establish regulations governing such grants. The regulations shall include, but shall not be limited to, provisions addressing renewals of grants; financial need; the calculation of grant amounts, after consideration of any additional financial resources or aid the student may hold; the grade point average required to retain such grant; and procedures for the repayment of tuition and fees for failure to meet the requirements imposed by this section. (2000, c. 968.)

**Rights of students under the Family Educational Rights**

**and Privacy Act**

Pursuant to a federal statute enacted to protect the privacy rights of students (Family Educational Rights and Privacy Act of 1974 [FERPA], as amended, enacted as Section 438 of the General Education Provisions Act), eligible students of Virginia Commonwealth University are permitted to inspect and review education records of which the student is the subject. A statement of university policy concerning inspection and disclosure of education records has been formulated in compliance with the federal statute. Copies of the policy also are available from the Office of Records and Registration or on the Web at <http://www.vcu.edu/enroll/rar/rights.html>.

Generally, the act provides that no personally identifiable information will be disclosed without the student's consent, except for directory information and information to other school officials with a legitimate educational interest. When personally identifiable information, other than directory information, is disclosed, a record will be maintained of these disclosures. This record also is available for inspection and review by the student.

If an eligible student feels that his or her education record is inaccurate, misleading or otherwise in violation of the student's privacy or other rights, the student may request an amendment to the record.

Should the university fail to comply with the requirements of the act, the student has the right to file a complaint with the Family Policy Compliance Office, U.S. Department of Education, 400 Maryland Ave., S.W., Washington, D.C. 20202-5901.

**Parental Notification Amendment**

Amendments to FERPA signed into federal law in fall 1998 specifically allow notification to the parents or guardians of students under the age of 21 who violate any law or university rule regarding use or possession of alcohol or other controlled substance. The Virginia Attorney General's Task Force on Drinking by College Students also recommended such notification in its 1998 report.

In accordance with these documents, a parental notification procedure has been included in the VCU Drug Free Schools and Workplace Policy.

**University resources and services**

**Business Services**

[www.bsv.vcu.edu](http://www.bsv.vcu.edu)

**Campus Police**

[www.vcu.edu/police](http://www.vcu.edu/police)

**Career Center**

[www.students.vcu.edu/careers](http://www.students.vcu.edu/careers)

**Computing Services**

[www.vcu.edu/it](http://www.vcu.edu/it)

**Counseling Services, University**

[www.students.vcu.edu/counsel](http://www.students.vcu.edu/counsel)

**Dining Services**

[www.bsv.vcu.edu/vcufood](http://www.bsv.vcu.edu/vcufood)

**Disability Support Services, Offices of**

[www.students.vcu.edu/dss](http://www.students.vcu.edu/dss)

**Distance Education**

[www.vcu.edu/it/dist\\_ed](http://www.vcu.edu/it/dist_ed)

**Equal Employment Opportunity/Affirmative Action Services**

[www.vcu.edu/eeoaa](http://www.vcu.edu/eeoaa)

**Health Services and health insurance, University Student**  
[www.students.vcu.edu/health](http://www.students.vcu.edu/health)

**Help Desk**  
[www.at.vcu.edu/helpdesk](http://www.at.vcu.edu/helpdesk)

**Housing**  
[www.students.vcu.edu/housing](http://www.students.vcu.edu/housing)

**Information Technology Services**  
[www.vcu.edu/it](http://www.vcu.edu/it)

**Intercollegiate Athletics**  
[vcurams.vcu.edu](http://vcurams.vcu.edu)

**Mail Services**  
[www.bsv.vcu.edu/maillsrv](http://www.bsv.vcu.edu/maillsrv)

**Media Support Services**  
[www.at.vcu.edu/media](http://www.at.vcu.edu/media)

**Online@VCU**  
[www.bsv.vcu.edu/online@vcu](http://www.bsv.vcu.edu/online@vcu)

**Open Access Labs**  
[www.at.vcu.edu/faq/class/computerlabs\\_classrooms.html](http://www.at.vcu.edu/faq/class/computerlabs_classrooms.html)

**Parking and Transportation**  
[www.bsv.vcu.edu/vcupark](http://www.bsv.vcu.edu/vcupark)

**Preparing Future Faculty Initiatives**  
[www.vcu.edu/graduate/bboard/initiatives.html](http://www.vcu.edu/graduate/bboard/initiatives.html)

**Recreational Sports**  
[www.students.vcu.edu/recsports](http://www.students.vcu.edu/recsports)

**Research and scientific computing**  
[www.at.vcu.edu/research](http://www.at.vcu.edu/research)

**Retail stores**  
[www.bsv.vcu.edu/retailstr](http://www.bsv.vcu.edu/retailstr)

**Student Academic Support Services, MCV Campus**  
[www.students.vcu.edu/pda/mcv\\_sass.html](http://www.students.vcu.edu/pda/mcv_sass.html)

**Student Affairs and Enrollment Services, Office of**  
[www.students.vcu.edu](http://www.students.vcu.edu)

**Student Computer Initiative**  
[www.vcu.edu/sci](http://www.vcu.edu/sci)

**Student Services Centers**  
[www.vcu.edu/enroll/ssc](http://www.vcu.edu/enroll/ssc)

**University Student Commons and Activities**  
[www.students.vcu.edu/commons](http://www.students.vcu.edu/commons)

**VCUCard**  
[www.vcucard.com](http://www.vcucard.com)

**VCU e2 Bookstore**  
[www.bkstr.com/webapp/wcs/stores/servlet/StoreCatalogDisplay?storeId=10372&langId=-1&catalogId=10001](http://www.bkstr.com/webapp/wcs/stores/servlet/StoreCatalogDisplay?storeId=10372&langId=-1&catalogId=10001)

**VCU Libraries**  
[www.library.vcu.edu](http://www.library.vcu.edu)

**VCU Medical Center Bookstore**  
[www.bkstr.com/webapp/wcs/stores/servlet/StoreCatalogDisplay?storeId=10373&langId=-1&catalogId=10001](http://www.bkstr.com/webapp/wcs/stores/servlet/StoreCatalogDisplay?storeId=10373&langId=-1&catalogId=10001)

**VCUnet**  
[www.vcu.edu/vcunet](http://www.vcu.edu/vcunet)

**Web Services**  
[www.vcu.edu/web](http://www.vcu.edu/web)

## **Consumer information**

The federal Higher Education Act of 1965, as amended, requires that institutions of higher education disclose certain consumer information to current students, prospective students, current employees and/or prospective employees. This consumer information can be found online at <http://www.consumerinfo.vcu.edu>.

# College of Humanities and Sciences

The College of Humanities and Sciences was organized in 1966 (then the School of Arts and Sciences) as a combination of several existing departments at Richmond Professional Institute: Biology, Chemistry, English, Foreign Languages, and History and Political Science. The departments of Philosophy and Religious Studies, Mathematical Sciences, Physics, Psychology, Sociology and Anthropology, and Political Science were developed or added subsequently.

Arts and Sciences began its first graduate programs in 1969 with master's programs in psychology and sociology. Master's programs in biology and mathematical sciences and a doctoral program in clinical psychology were soon to follow in 1971. In 1974, English/English education began a master's program offered cooperatively by the Department of English and the Division of Teacher Education of the School of Education. In that same year the graduate program in chemistry, a cooperative venture between the departments of Chemistry on the Monroe Park Campus and Pharmaceutical Chemistry on the MCV Campus, was transferred administratively to the School of Arts and Sciences. Beginning in 1976, a master's degree was created in mass communications, while in 1978, a doctoral program in social policy and social work started in cooperation between the Department of Sociology and Anthropology and the School of Social Work.

In July 1981, the School of Arts and Sciences and the Department of Mass Communications were organized into the College of Humanities and Sciences and the School of Mass Communications. The Master of Fine Arts in Creative Writing commenced in 1983 followed by the M.S. in Physics in 1984. Three years later, the Department of Mathematical Sciences established the M.S. in Computer Science program, and finally, a master's degree in history was initiated in 1994 through the Department of History.

Effective July 1, 1994, the departments of Criminal Justice, Public Administration and Urban Studies joined the college from the dissolved School of Community and Public Affairs. Each department brought to the college both master's and postbaccalaureate certificate programs within their disciplines. The Public Administration program was merged with the Political Science program to form the Department of Political Science and Public Administration. The Ph.D. in Public Administration program was initially incorporated into the newly merged department and now resides in the Center for Public Policy.

## Administration

826 W. Franklin St.  
P.O. Box 842019  
Richmond, VA 23284-2019  
(804) 828-1674  
Fax (804) 828-2171  
<http://www.has.vcu.edu>

**Robert D. Holsworth**  
Acting Dean

**Fred Hawkridge**  
Executive Associate Dean

**Catherine Ingrassia**  
Associate Dean

**Kevin Allison**  
Associate Dean

**S. Jon Steingass**  
Associate Dean

## Graduate programs

The College of Humanities and Sciences offers the following graduate degree programs:

Biology, M.S.  
Chemistry, M.S. and Ph.D.  
Creative Writing, M.F.A.  
Criminal Justice, M.S.  
English, M.A.  
Forensic Science, M.S.  
History, M.A.  
Mass Communications, M.S.  
    advertising  
    creative brand management  
    scholastic journalism  
    strategic public relations  
Mathematical Sciences, M.S.  
    applied mathematics  
    mathematics  
    operations research  
    statistics  
Media, Text and Art, Ph.D.  
Medical Physics, Ph.D.  
Physics, M.S.  
Psychology, M.S. and Ph.D.  
    clinical  
    counseling  
    general  
Public Administration, M.P.A.  
Sociology, M.S.  
Urban and Regional Planning, M.U.R.P.

### Postbaccalaureate graduate certificates

Applied Social Research  
Criminal Justice  
Gender Violence intervention  
Geographic Information Systems  
Historic Preservation Planning  
Nonprofit Management  
Planning Information Systems  
Public Management (Graduate)  
Statistics (Undergraduate)  
Urban Revitalization

In addition to these degree programs, the College of Humanities and Sciences offers selected graduate courses in the Department of Philosophy and the School of World Studies (Foreign Languages and Religious Studies), but does not offer graduate degree programs in these areas.

## Graduate admission requirements

In addition to the general requirements for admission to graduate studies as stated in the Graduate Studies at VCU chapter of this bulletin, persons seeking admission to any of the graduate programs in humanities and sciences should:

- have a bachelor's degree in the discipline in which application for graduate study is made or, in some programs as noted, a bachelor's degree in some other appropriate area,
- submit Graduate Record Examination (GRE) scores (some departments require the scores on the advanced GRE within the discipline; some departments accept LSAT and MAT scores in lieu of GREs) and,
- have submitted letters of recommendation that comment on the applicant's ability to undertake graduate study in the specified area.

All applications will be considered in terms of the specific requirements for admission noted in the description of the individual programs and of the applicant's ability to perform satisfactorily in the program for which he/she has applied. The judgment of that ability will be based on the supporting material submitted with the application. Some graduate programs must limit enrollment to a fixed number of the best-qualified applicants. Final action on admission is taken by the dean of the Graduate School in consultation with the College of Humanities and Sciences and the program concerned.

Applicants whose applications reach the university after July 1 for the fall semester and after Nov. 15 for the spring semester may not have their applications processed in time for registration. The applicant whose application arrives late may be considered for admission as a special student, but there is no guarantee that the special student later will be accepted into a degree program. Refer to the programs section of the Graduate School Web site for specific deadlines for all graduate programs.

## Registration

Although most students register for the first semester, which begins in August, they may arrange to begin graduate work during the spring semester with the exception of the programs in clinical and counseling psychology.

## Scholarships, assistantships, fellowships and other financial assistance for graduate students

The College of Humanities and Sciences seeks to attract and support graduate students of the highest caliber and to prepare them, through research and instruction, to meet local and national needs for highly trained men and women. Recognizing that financial limitations may inhibit some qualified students from applying, the college attempts to inform students of the options of various loans, grants and work-study opportunities that are available to them as well as assist them in financing their education by offering various forms of financial aid and facilitating the process of seeking financial assistance from external sources. Additionally, the college believes that the experience of being a teaching or research assistant reinforces the learning that takes place in the classroom. The value of teaching assistants also is recognized as being beneficial to the college's undergraduate programs.

Types of financial aid that are available to graduate students fall into three basic categories: aid that does not have to be repaid (grants, scholarships and tuition waivers), aid that does have to be repaid (loans) and aid that enables students to earn a portion of their school costs (work-study, graduate teaching assistantships and graduate research assistantships).

Offers of financial aid are based on financial need and/or skill and competency. Financial need is determined by information contained in the Federal Application for Student Aid (FAFSA) completed by the student. Not all financial aid is based on financial need. To ascertain your eligibility for the different types of financial aid, contact the VCU Office of Financial Aid at 901 W. Franklin St., P.O. Box 843026, Richmond, VA 23284-3026, (804) 828-6669, and the department to which you will be applying. The university library has reference books listing other types of scholarships and grants. International students should contact: Office of International Education at 916 W. Franklin St., P.O. Box 843043, Richmond, VA 23284-3043, (804) 828-6016.

Graduate teaching assistantships and graduate research assistantships are forms of financial aid that provide teaching and research positions for graduate students within their field of study. These are not loans and do not have to be repaid because the student is actually earning income for services rendered. Usually graduate assistants must work the equivalent of 20 hours per week. Assistantships are awarded to students who have demonstrated academic excellence. Individual departments award the assistantships, which usually include payment of tuition; the teaching

and/or research duties of graduate assistants vary among departments. Graduate students interested in seeking these teaching and research positions are advised to contact the departments to which they will apply for admission.

Graduate students applying for financial assistance should remember the following tips:

- apply early
- use federal tax forms to complete the FAFSA
- save copies of all forms completed, including tax returns
- check with the specific department for application requirements and deadlines

**Students should assume they are eligible, not ineligible.**

\* Also see departmental listings.

## The student adviser and the graduate committee

All departments offering graduate degrees in the College of Humanities and Sciences provide graduate students with advising either through a single adviser, the student's graduate committee or a departmental graduate committee. For details, students should consult the departmental director of graduate studies or the department chair.

## Graduate degree requirements

- Full-time graduate status shall consist of a minimum of nine and a maximum of 15 credits per semester. No more than 12 semester credits may be earned in a summer session. See the Graduate Studies at VCU chapter of this bulletin for course load requirements for students awarded graduate assistantships.
- Graduate students are required to maintain an overall GPA of 3.0 ("B"). Students who do not maintain a "B" average during the course of their program may be dropped from the program at any time on recommendation of the appropriate department committee to the dean of the Graduate School. If students earn less than a "B" on 20 percent or more of all attempted credits, their graduate status must be reviewed for continuation by the appropriate department committee.
- At least half of the credits required in the student's program must be those designated as exclusively for graduate students; that is, those at the 600 level or above.
- Graduate students must have earned an overall GPA of 3.0 ("B") in order to receive a degree.

In addition to these requirements and those set forth in the Graduate Studies at VCU chapter of this bulletin, students must meet the requirements for specific degrees set forth in the departmental listings. Students also should consult the Continuous Enrollment Policy stated in the [Graduate Studies at VCU](#) section of this bulletin.

VCU requires registration for a defined credit-hour level during both the didactic and research phases of advanced degree training. For programs requiring the preparation of a thesis or dissertation, there is no obligatory linkage between the accumulation of credit hours and an expectation that a degree be awarded.

As a guide to monitoring the timely completion of the degree requiring a thesis or dissertation within the present enrollment framework, the accumulation of 80 credit hours for a master's degree and 180 credit hours



for a doctoral degree can be taken to be reasonable credit maxima. Unless stated otherwise, these figures apply only to programs offered by the College of Humanities and Sciences.

Students are required to submit in advance of the date when they expect to receive a degree a Graduation Application Form to the dean of the College of Humanities and Sciences. Deadlines for the submission of the Graduation Application Form are listed in the academic calendars online at <http://www.vcu.edu/academiccalendars>; for departmental deadlines the student should consult the departmental adviser. Individual departments may require additional forms.

## Appeal procedures

Graduate students in the College of Humanities and Sciences have the right to appeal course grades or other academic actions on the grounds of a breach of due process. See the [Graduate Studies at VCU](#) section of this bulletin for a summary of the Grade Review Procedure. An appeal of an academic action other than a grade review is governed by the Graduate Student Academic Appeal Procedure. A copy of this document can be obtained from department offices.

## Accreditation

Chemistry (bachelor's degree)  
The American Chemical Society

Psychology (doctoral degrees: clinical, counseling)  
American Psychological Association

Public Administration (master's degree)  
National Association of Schools of Public Affairs and Administration

Urban and Regional Planning (master's degree)  
Planning Accreditation Board

## L. Douglas Wilder School of Government and Public Affairs

The L. Douglas Wilder School of Government and Public Affairs brings together faculty from multiple disciplines that share a common interest in public affairs. The school's graduate faculty includes individuals with strong research and analytical skills and with substantive expertise in such fields as criminal justice, economics, political science, public administration, urban planning and community development. The faculty is committed to producing cutting-edge research and public service that can bridge the gap between theory and practice and to providing high quality, innovative and nationally competitive graduate and professional degree programs for our students.

The School of Government and Public Affairs is an intellectually exciting place committed to having a genuine impact on public policy and providing an intellectually stimulating education for future public affairs professionals who share in our commitment.

## Administration

**Robert D. Holsworth**  
Director

## Program offerings

The school offers a variety of graduate educational opportunities for both full-time students and for practicing professionals interested in enhancing their skills or pursuing graduate-level work on a part-time basis. Current offerings include three nationally recognized master's programs and six

graduate-level certificates. These programs include:

[Master of Science in Criminal Justice](#)  
[Master of Public Administration](#)  
[Master of Urban and Regional Planning](#)  
[Certificate in Criminal Justice](#)  
[Certificate in Geographic Information Systems](#)  
[Certificate in Historic Preservation Planning](#)  
[Certificate in Nonprofit Management](#)  
[Certificate in Planning Information Systems](#)  
[Certificate in Public Management](#)  
[Certificate in Urban Revitalization](#)

The school also offers two dual degree programs with the University of Richmond's T.C. Williams Law School. Through these programs students can simultaneously obtain a law degree (J.D.) and either the Master of Public Administration or the Master of Urban and Regional Planning.

## Admission

Admission to programs of the L. Douglas Wilder School of Government and Public Affairs is available to qualified students on a rolling admissions basis. Since the demand for admission to some programs is high and space availability is limited, students are encouraged to apply well in advance of their proposed admission dates.

As outlined below, admission requirements vary by academic program. No application packet will be considered by the relevant program admissions committee until all the required materials have been submitted by the applicant.

Application forms and instructions for applying to all graduate programs are available on the Graduate School Web site at <http://www.vcu.edu/graduate>.

## Admission to a master's program from the certificate programs

The Graduate Certificate in Public Management and the Graduate Certificate in Nonprofit Management are designed for persons in professional positions who require a limited number of courses in contemporary management theory and skills. However, if a student later decides to pursue the M.P.A. degree, successfully completed certificate courses may be applied toward the degree. Successful completion of either certificate does not guarantee admission into the M.P.A. degree program.

The courses in the Postbaccalaureate Certificate in Criminal Justice program are the same as the master's courses and, with grades of "B" or better and upon acceptance into the master's degree program, are fully transferable to the Master of Science in Criminal Justice program.

All courses in the Certificate in Urban Revitalization may be applied to meet the requirement of the Master of Urban and Regional Planning degree. However, successful completion of the certificate program does not guarantee admission into the M.U.R.P. Degree program.

## Provisional admission

- In rare cases, applicants who do not meet the requirements for full admission may be accepted provisionally upon recommendation of the program's admissions committee. The conditions for earning full admission are stated in the provisional acceptance letter sent by the dean of the Graduate School. Conditions usually include the requirement that the student complete the first nine hours of

departmental graduate courses with a grade of "B" or better in each course.

- Provisional admission does not constitute a waiver of the requirement to submit a GRE or other standardized test score.

### Continuous enrollment requirements and expectations

To remain in good standing, students must maintain continuous registration for each fall and spring semester (except for approved leaves of absence) until they have completed all requirements. Students who fail to register for two consecutive semesters (summer sessions included) will be dropped automatically from the program and must reapply for admission in order to continue. Exceptions to this policy will be made on an individual basis by petition. Students who reapply after having been dropped for failure to register continuously will be evaluated under the bulletin requirements in effect at the time of readmittance.

A minimum GPA of 3.0 on a 4.0 scale must be maintained. Compliance with other university regulations also is required.

### Part-time students

Since the school schedules many of its courses in the late afternoon or evening, its programs accommodate both full- and part-time students. Students also may take advantage of courses offered in the summer. Thus it is possible for a part-time student taking six credit hours per semester to finish the master's degree in four years or less.

### Nondegree-seeking students

Nondegree-seeking students must have an undergraduate degree from an accredited institution and the written approval of the instructor prior to registering for any graduate-level course. Nondegree-seeking students can take no more than six credit hours without authorization from the appropriate program coordinator.

### Transfer credit

With the consent of the admission committee or program coordinator, a maximum of six semester hours of appropriate graduate credit may be transferred and applied toward the Master of Science in Criminal Justice, the Master of Public Administration or the Master of Urban and Regional Planning. These hours will not have been credited toward another degree.

### Financial aid information

Information and application forms for financial aid may be secured from the VCU Office of Financial Aid, 901 W. Franklin St., Room 107, Richmond, VA 23284-3026, (804) 828-6669.

The L. Douglas Wilder School of Government and Public Affairs also offers a limited amount of financial assistance. Individuals interested in such assistance are urged to apply by March 30. Financial assistance available through the school includes:

**Graduate teaching assistant positions** – Duties involve helping with the instruction of courses. The level of support varies according to the work level, financial need and scholarship.

**Research assistant positions** – The stipend and number of positions depend upon the level of sponsored research carried out by the school each year.

**Tuition fellowships** – There are a limited number of tuition fellowships for full-time students within the three master's degree programs.

**T. Edward Temple Memorial Scholarship Award** – This award of approximately \$500 per year is given to an outstanding graduate student in the Master of Urban and Regional Planning program each year.

**The Senator Edward E. Willey Scholarship, the Virginia City Management Association/University Dr. T. Edward Temple Scholarship and the Leigh E. Grosenick Scholarship** – These scholarships are available to outstanding students in the Master of Public Administration program. Preference for these three scholarships is given to those who plan public careers in Virginia.

**Internships** – Paid, on-the-job internships are widely available in the Richmond area and elsewhere and are encouraged. VCU graduates also have been successful in obtaining presidential management internships in the federal government, state-government professional positions and local government positions.

### School-wide master's-level requirements

In addition to the program specific requirements of the Master of Public Administration, the Master of Science in Criminal Justice and the Master of Urban and Regional Planning as outlined elsewhere in this bulletin, the Wilder School requires all master's-level graduate degree-seeking students to acquire competence in four broad areas:

1. Research methods
2. Planning and/or policy analysis
3. Public administration
4. Ethics

Competence can be demonstrated by completion of the following:

#### Research methods

GVPA/PADM/URSP/CRJS 623 Research Methods for Government and Public Affairs

#### Planning/policy analysis

GVPA/URSP 632 Planning Theory and Processes  
or  
GVPA/PADM 625 Public Policy Analysis

#### Public administration

GVPA/PADM 601 Principles of Public Administration

#### Ethics

GVPA/PADM 683 Administrative Ethics  
or

A program specific course through which ethical issues are imbedded and discussed within a public sector context. Such courses would include: CRJS 550, PADM 661, PADM 689, URSP 632 and URSP 635.

Selection of courses to meet these competency requirements will be made by the student in consultation with his/her academic adviser. While each graduate of the Wilder School must demonstrate competence in each of the areas outlined above, substitutions for the specific courses may be made with the written approval of the appropriate graduate program coordinator.

### Criminal Justice, Certificate in (Postbaccalaureate graduate certificate)



## Admission requirements summary

### Criminal Justice, Certificate in (Postbaccalaureate graduate certificate)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Certificate	All semesters	No deadlines – rolling admissions	

The Postbaccalaureate Certificate in Criminal Justice program offers an abbreviated graduate-level course sequence of 15 credit hours for individuals with an academic and/or professional background in criminal justice.

This certificate program offers specialization for individuals interested or involved in law enforcement, corrections, juvenile justice or the courts. It combines survey and theory courses with research, management and policy courses on the justice system. The courses in the Postbaccalaureate Certificate in Criminal Justice program are the same as the master's courses and, with grades of "B" or better and upon acceptance into the master's degree program, are fully transferable to the Master of Science program

## Curriculum

Five courses are required for the certificate, as specified in the chart that follows. To receive the certificate the student must achieve a "B" average in the five courses with no more than one "C" grade and complete the 15-hour certificate program within three years.

	credits
CRJS 501 Criminal Justice Assessment	3
CRJS 601 Research Basis of Criminal Justice	3
Select three from the following courses:	9
CRJS 550 Professional Ethics and Liability	
CRJS 616 Justice Policies and Administration	
CRJS 620/SOCY 620 Seminar in Criminology	
CRJS 641 Jurisprudence	
Graduate elective	
	<hr/> 15

## Criminal Justice, Master of Science (M.S.)

### Admission requirements summary

#### Criminal Justice, Master of Science (M.S.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.	All semesters	No deadlines – rolling admissions	GRE, LSAT or GMAT

The graduate program in criminal justice is designed to provide advanced educational preparation for students and criminal justice professionals pursuing careers in the field of criminal justice. Such preparation includes understanding the range of theory, research and policy in criminal justice. The curriculum is directed especially toward assisting students in developing the advanced knowledge, skills and abilities required by criminal justice professionals.

The Master of Science in Criminal Justice requires 36 semester hours of course work. Students are expected to complete CRJS 501 as one of their first courses. CRJS 550, 601, 616, 620 and 641 also are required, as are six elective courses (18 credits) approved by the graduate coordinator.

Students who do not have criminal justice experience are encouraged to complete an approved internship (CRJS 693). To complete the M.S. curriculum, students must submit a portfolio of their work before they graduate.

## Admission requirements

Beyond the general Graduate School standards listed in [Graduate Studies at VCU](#) section of this bulletin, admission to the Master of Science in Criminal Justice also will be based on:

- an undergraduate GPA that exceeds 2.7 overall.
- a satisfactory score on the GRE. Call (800) GRE-CALL for exam information.
- previous evidence of ability to perform graduate-level work (where applicable).
- professional experience in criminal justice (where applicable).

## Degree requirements

In addition to general graduation requirements:

- Students must complete a minimum of 36 graduate semester credits, approved by the chair, with an overall GPA of 3.0 or above.
- Students must successfully complete the comprehensive examination. Students have a maximum of three opportunities to pass the comprehensive examination.
- Students may complete a supervised field placement (CRJS 693) under the direction of the department and the immediate supervision of a qualified person in an approved agency or facility. Applications for all internships must be submitted one semester in advance to the program's internship coordinator.

### Master of Science in Criminal Justice – justice option

	credits
<b>Core</b> (six courses)	
CRJS 501 Criminal Justice Assessment	3
CRJS 550 Professional Ethics and Liability	3
CRJS 601 Research Basis of Criminal Justice	3
CRJS 616 Justice Policies and Administration	3
CRJS 620/SOCY 620 Seminar in Criminology	3
CRJS 641 Jurisprudence	3
	<hr/> 18

Note: Students may complete an approved internship (CRJS 693). Students must turn in a portfolio of their scholarly work as part of the graduation requirements.

#### Approved electives (six courses)

Electives must be approved by the adviser.	18
	<hr/> 36

## Geographic Information Systems, Certificate in (Postbaccalaureate graduate certificate)

The Postbaccalaureate Graduate Certificate in Geographic Information Systems emphasizes the core functions and applications of GIS. It

provides specialized training in the operations and techniques related to the creation, analysis, modeling, visualization, interpretation and management of geographic information.

## Admission requirements

Admission requirements include an official application; three letters of reference; a letter of intent describing objectives in applying for the certificate; an official transcript showing successful completion of baccalaureate degree or its equivalent from an accredited college or university with a minimum GPA of 2.7 (out of 4.0) in the last 60 hours of undergraduate study.

## Curriculum

This GIS certificate program can be completed in one academic year. To receive the GIS Certificate, students must complete 12 graduate credits of GIS course work that includes three required and one elective courses with a grade-point average of 3.0 or higher (out of 4.0). The following schedule is suggested as a means of completing the certificate program:

Fall semester (6 credits)

URSP 621 Introduction to Geographic Information Systems (required)

URSP 622 Community Socioeconomic Analysis Using GIS (required)

Spring semester (6 credits)

URSP 625 Spatial Database Management and GIS Modeling (required)

Plus one elective course from the following cluster:

URSP 627 GIS Applications in Decision Analysis

Other GIS-related courses approved by the certificate program coordinator.

All credits earned in the GIS certificate program are transferable to the Master of Science in Criminal Justice program, the Master of Public Administration program, or the Master of Urban and Regional Planning program. Also, students may use courses from the GIS certificate to simultaneously satisfy requirements in any graduate degree at the university with the respective department's approval, including the Master of Science in Criminal Justice, the Master of Public Administration, or the Master of Urban and Regional Planning programs. However, students must apply to the certificate and graduate degree programs separately.

## Historic Preservation Planning, Certificate in (Postbaccalaureate graduate certificate)

### Admission requirements summary

#### Historic Preservation Planning, Certificate in (Postbaccalaureate graduate certificate)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Certificate	Fall Spring	Jul 20 Nov 30	GRE

The certificate in historic preservation planning provides specialized training in the techniques and processes of historic preservation and planning. This graduate-level program includes courses in historic preservation, architectural history, preservation analysis and methods, building reuse, and the role of the public and private sectors in implementing proposals. The program is useful for mid-career professionals in planning, historic preservation, architecture and those in allied fields who wish to learn new skills to expand their career options. It also is useful for recent college graduates who want advanced training in the application of historic preservation in urban development.

## Admission requirements

Students must meet the following admission requirements:

- completion of an official application form,
- letter of intent describing interest in applying to the certificate in historic preservation planning,
- an official transcript showing successful completion of an appropriate undergraduate degree,
- three letters of recommendation and
- a minimum grade-point average of 3.0 (out of 4.0) in the last 60 hours of undergraduate study.

## Curriculum

The certificate consists of nine credits in architectural history and nine credits in urban planning.

**Urban planning:** After discussing the program with an adviser, students should choose three of the following courses:

URSP 517 Historic Preservation in Planning

URSP 610 Introduction to Planning

URSP 611 Principles of Urban Design

URSP 635 Legal and Legislative Foundations of Planning

URSP 647 Adaptive Reuse of Buildings

**Architectural history:** After discussing the program with an adviser, students should choose three courses from among the offerings in architectural history at the 500 or 700 level. Examples of courses are:  
ARTH 502 Historic Preservation and Architectural History  
ARTH 789 Palladianism and its Alternatives  
ARTH 789 The World of Jefferson and Letrobre  
ARTH 789 From Neoclassicism to World War I  
ARTH 789 The Arts and Crafts Movement

## Nonprofit Management, Certificate in (Postbaccalaureate graduate certificate)

### Admission requirements summary

#### Nonprofit Management, Certificate in (Postbaccalaureate graduate certificate)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Certificate	All semesters	No deadlines	No test requirements

The graduate certificate in nonprofit management is a postbaccalaureate program designed to enable practitioners principally in the nonprofit sector to acquire knowledge and skills in managing nonprofit organizations without pursuing a full master's degree.

## Admission requirements

Admission to the certificate program requires the same procedure used in applying to the M.P.A., except that a standardized examination is not required.

## Curriculum

The certificate requires a total of 15 graduate credit hours that is comprised of four courses in the graduate public administration program

and one elective that may be public administration, or from elsewhere within the school or university. The following courses are required:

PADM 650 Principles of Nonprofit Management  
 PADM 656 Fund Development for Nonprofit Organizations  
 PADM 659 Financial Management for Nonprofit Organizations  
 PADM 661 Nonprofit Law, Governance and Ethics

### **Combined Master of Social Work (M.S.W.) and Certificate in Nonprofit Management (Post-baccalaureate graduate certificate)**

#### **Admission requirements summary**

##### **Combined Master of Social Work (M.S.W.) and Certificate in Nonprofit Management (Post-baccalaureate graduate certificate)**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.W.	<b>Regular Standing</b>		
	Full-time – Fall	Feb 1	
	Part-time – Fall	Feb 1	
	<b>Advanced Standing</b>		
	Summer only – Richmond campus	Dec 1	

##### **Special requirements:**

If applying for off-campus program for concentration year, indicate location in item 5 on application

See Social Work Web site for supplemental academic information form.

Students seeking a Master of Social Work may pursue a Certificate in Nonprofit Management through Virginia Commonwealth University's L. Douglas Wilder School of Government and Public Affairs.

Through a cooperative arrangement with the L. Douglas Wilder School of Government and Public Affairs, M.S.W. students pursuing the Social Work Administration, Planning and Policy Practice (SWAPPP) concentration may simultaneously earn the graduate certificate in nonprofit management offered by the L. Douglas Wilder School of Government and Public Affairs.

#### **Certificate requirements for M.S.W. students**

Social work SWAPPP concentration students are required to complete three nonprofit courses: PADM 656 Fund Development for the Nonprofit Sector (fall course); PADM 659 Financial Management for Nonprofit Organizations (spring course); and PADM 661 Nonprofit Law, Governance and Ethics (summer course) in the L. Douglas Wilder School of Government and Public Affairs.

Two social work SWAPPP courses are substituted for six credit hours of the certificate's 15 credit hour requirement. One of these courses is SLWK 712 Social Work Planning and Administrative Practice I. The second course can be SLWK 711 Strategies for Social Work Planning and Administrative Practice or SLWK 713 Social Work Planning and Administrative Practice II.

M.S.W. clinical concentration students must complete 15 course credits in nonprofit management. Six of the PADM nonprofit credits will satisfy the M.S.W. elective requirement for either concentration.

#### **Application process**

To earn the Certificate in Nonprofit Management simultaneously with the M.S.W., it is necessary to complete a graduate school application for the

certificate program; however, no supporting information or fees are required for students who are already enrolled in good standing in the social work master's degree program.

Additional information may be obtained from the School of Social Work Web site at: [www.vcu.edu/slwwweb](http://www.vcu.edu/slwwweb) or by writing:

##### **School of Social Work**

Virginia Commonwealth University  
 1001 West Franklin Street  
 Richmond, Virginia 23284-2027  
 Attention: Certificate in Nonprofit Management Adviser

Detailed information about the Certificate in Nonprofit Management can be obtained from Dr. Janet Hutchinson, associate professor and director of the Master of Public Administration program, (804) 828-8041 or e-mail: [jhutch@vcu.edu](mailto:jhutch@vcu.edu).

### **Planning Information Systems, Certificate in (Postbaccalaureate graduate certificate)**

#### **Admission requirements summary**

##### **Planning Information Systems, Certificate in (Postbaccalaureate graduate certificate)**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Certificate	Fall	Jul 20	GRE
	Spring	Nov 30	
		(new deadlines)	

The certificate in planning information systems is a program to provide specialized cross-disciplinary training for professionals with either information systems or planning backgrounds who wish to increase their knowledge and skills in the application of computer methods to urban and regional planning problems.

#### **Admission requirements**

Admission requirements are the same as for the Master of Urban and Regional Planning.

#### **Curriculum**

The program consists of nine hours of courses in information systems and nine hours in urban studies and planning.

### **Public Administration, Master of (M.P.A.)**

#### **Admission requirements summary**

##### **Public Administration, Master of (M.P.A.)**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.P.A.	All semesters	Mar 30 (for financial aid consideration)	GRE, GMAT, LSAT or MAT

##### **Special requirements:**

Will accept GRE Writing Assessment scores for tests taken before 12/02. Applicants who submit LSAT or MAT scores must have received a grade of "C" or better in an undergraduate math course.

The Master of Public Administration program is designed to meet the graduate educational needs of pre-service and in-service professionals for careers in public management and analysis in the public and nonprofit sectors. The program is accredited by the National Association of Schools of Public Affairs and Administration.

## Admission requirements

In addition to the general requirements, selection is made on the basis of prior academic performance, professional accomplishments and other indicators of the ability to pursue graduate studies and a professional career in public management successfully. Specifically, the application for admission requires a transcript documenting the completion of a bachelor's degree, three letters of reference (including both academic and professional references if possible), a current resume and a satisfactory standardized test score (GRE, GMAT, MAT, LSAT). Students submitting MAT and LSAT scores must have taken an undergraduate math course (algebra, statistics, finite mathematics) and passed with a "C" or better.

## Degree requirements

- A student must complete a minimum of 36 semester hours, as approved, with an overall GPA of 3.0 or above. Students who do not have at least one year of professional-level experience in the public sector or in a nonprofit agency are required to earn three additional hours of credit in a public service practicum (for a total of 39 semester hours of credit for the degree).
- All students who are required to take the practicum will usually do so during the summer between the first and second years or during the last semester of course work. The practicum should last a minimum of 300 hours as required by the National Association of Schools of Public Affairs and Administration. The scheduling of the practicum will be flexible enough to accommodate the needs of those students who pursue the degree on a part-time basis.

Each practicum will be negotiated between VCU and the host agency, including the scope of work to be performed by the student, the type and extent of supervision both within the agency and from the university, and the stipend. A learning contract will be executed among the department, the agency and the student. A written student project is required to complete the internship.

- All students are required to complete the courses in the core curriculum unless competence in the subject matter can be demonstrated on the basis of previous experience or course work.

## Advising

After admission, each student will be assigned an adviser who will assist in planning the specific sequence of courses and program of study.

## Core curriculum

	credits
<b>Required courses</b>	
PADM 601 Principles of Public Administration	3
PADM 602 Public Administration Theory	3
PADM 607 Public Human Resource Management	3
PADM 609 Financial Management in Government	3
PADM 623 Research Methods for Public Administration	3
PADM 624 Quantitative Methods for Public Administration	3
PADM 625 Public Policy Analysis	3
PADM 689 Seminar in Public Administration or PADM 690 Reading Seminar	3

	24
<b>Electives</b>	12
	36
<b>Practicum</b> (if required)	3
	39

## Concentration possibilities

Students may develop a concentration in one of several areas from among the elective courses offered by the department or in combination with courses elsewhere in the university. Possibilities include the following concentrations:

- environmental policy
- human resource management
- public financial management
- executive leadership
- public policy analysis and evaluation
- local government management
- nonprofit management

Other concentrations may be developed including concentrations in other fields. These concentrations may require agreement with other degree programs such as criminal justice, economics, gerontology, social work, urban and regional planning, business, and health administration.

## Accelerated Bachelor of Arts (B.A.) and Master of Public Administration (M.P.A.)

This program permits selected students to earn the B.A. and M.P.A. in a minimum of five years, by taking certain master's courses during the senior year of their undergraduate program. The program is restricted to students with strong credentials and a clear interest in a career in the public or nonprofit sector. To be eligible, a student must have completed 90 credits of course work and have an overall GPA of 3.0, with a GPA of 3.3 in political science courses. The accelerated program is limited to students with a major or minor in political science.

Upon being accepted into the accelerated program, a student must meet the same standards of performance as a graduate student, must maintain a 3.0 GPA and must satisfactorily complete all of the requirements for the degree, as stated in this bulletin. Students admitted to the accelerated program receive guidance from the public administration program director and the faculty coordinator of the accelerated program.

To graduate with a bachelor's degree, a student must complete 120 hours of course work. Of these credits, 33 must be in political science. Of the 33 political science credits, 12 are required credits (POLI 103 U.S. Government, POLI/INTL 105 International Relations, POLI 107 Political Theory, POLI 109 Comparative Politics). Students enrolled in the accelerated program may take up to six credits of graduate public administration courses in each of the final two semesters of their undergraduate course work. These courses are shared credits with the graduate program, meaning that they will be applied toward the undergraduate degree requirement and the graduate degree requirement.

A maximum of 12 graduate credits may be taken prior to completion of the baccalaureate degree.

### Combined Master of Public Administration (M.P.A.) and Juris Doctor (J.D.)

The dual degree program is designed to provide its graduates with two degrees — Master of Public Administration and Juris Doctor — attesting to competency in both public administration and law. This competency is applicable to areas of practice drawing upon knowledge and skills from each of these fields. The program brings together persons interested in both the broader aspects of public policy and government affairs, and the law. It also brings together two fields that require complementary knowledge and skills, which may be directed toward solving problems that are associated with the affairs of the government and nonprofit sectors. This integration of education in public administration and law draws on the contributions that each discipline can make to a professional knowledge base for practice in both fields.

Students who are accepted into the dual degree program are permitted to apply 12 credit hours of work in the M.P.A. toward meeting the graduation requirements in the T.C. Williams School of Law, and up to 12 credit hours of work in the T.C. Williams School of Law toward meeting the graduation requirements for the M.P.A. This credit application enables participants in the dual degree program to complete the requirements for the J.D. and the M.P.A. in an estimated four years of full-time course work. Applicants for this program are required to meet admission standards of both the T.C. Williams Law School of the University of Richmond and the Graduate School and the M.P.A. program of VCU.

### Public Management, Certificate in (Postbaccalaureate graduate certificate)

#### Admission requirements summary

##### Public Management, Certificate in (Postbaccalaureate graduate certificate)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Certificate	All semesters		

The graduate certificate in public management is a program designed to enable practitioners in government and nonprofit organizations to acquire knowledge and skills in public administration without pursuing a full master's degree. Further details are available from the program office.

The graduate certificate in public management is offered in at least two locations off campus: Chesterfield County and Henrico County.

#### Admission requirements

Admission to the certificate program requires the same application materials as the M.P.A. except a standardized examination is not required.

#### Curriculum

The certificate requires a total of 18 hours of graduate credits involving a mix of required and elective courses. The courses are the same as those offered to M.P.A. students.

### Urban and Regional Planning, Master of

### (M.U.R.P.)

#### Admission requirements summary

##### Urban and Regional Planning, Master of (M.U.R.P.)

Indicate specialization:

Economic Development, Environmental Planning, Housing and Community Planning, Planning Management, Physical Land Use Planning, or Urban Revitalization

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.U.R.P.	Fall	Jul 20 (Mar 1 for financial assistance)	GRE, GMAT or LSAT
	Spring	Nov 30 (new deadline)	

The graduate program in urban and regional planning is accredited by the Planning Accreditation Board and provides professional grounding in the theory and methodologies of planning through a curriculum that balances classroom and field experience.

The M.U.R.P. is a two-year degree program requiring 48 semester hours of class work. Each student must complete an internship with a planning agency or organization, as well as school and programmatic required courses totaling 30 semester hours. Core requirements for students within the Master of Urban and Regional Planning program will be met through the following courses:

- Introduction to Planning
- Community Socioeconomic Analysis using GIS
- Foundations for Development Planning
- Research Methods in Government and Public Affairs
- Planning Theories and Processes
- Legal and Legislative Foundations of Planning
- Principles of Public Administration
- Planning Studio I
- Planning Studio II or Thesis

In selecting their elective courses, students may (1) opt for exposure to a wide array of planning-related subject matter (the generalist or comprehensive approach), (2) select one of the areas of specialization defined by the department's faculty (see the list that follows), or (3) develop an individualized program, focusing on one or more self-defined topics. Regardless of the approach selected, students are expected to meet regularly with their faculty advisers for discussion of their courses of study in relation to their career plans.

The following faculty-defined areas of specialization are offered by the department:

- community revitalization planning
- metropolitan planning
- environmental planning
- international development planning

## Admission requirements

Beyond the general Graduate School admissions standards, the following specifications apply:

- Students must have a minimum of a 2.7 GPA (on a 4.0 scale) in their last 60 semester hours of undergraduate work. In addition, a GPA of not less than 3.0 must have been maintained in their undergraduate majors. Finally, applicants are expected to receive satisfactory scores on each of the categories in the GRE, LSAT or GMAT examination.
- Students not meeting these requirements may be admitted to the program on a provisional basis. The provisional period shall consist of the first nine to 12 hours of designated graduate work in which all grades must be no less than "B." Provisional admission does not constitute a waiver of the requirement related to a standardized test.
- Generally, at least two of the three letters of reference should come from former faculty.

## Degree requirements

- Students must complete a minimum of 48 graduate credits plus an internship. A core of required courses accounts for 30 of these credits; the remaining 18 are electives. An overall GPA of at least 3.0 (on a 4.0 scale) is required for receipt of the M.U.R.P. degree.
- Students within the M.U.R.P. program are required to complete either a thesis (URSP 764) or to prepare a professional quality plan through the Planning Studio II course (URSP 762). Program administrators request permission to utilize the grade of PR, in addition to normal letter grades ("A," "B," "C," "D," "F") in URSP 762 Planning Studio II. This will allow students the ability to work on their plans over a more extended period of time, if necessary.

### Internship and placement

The internship is designed to give students practical experience in planning-related activities in an institutional context. Normally, the internship is taken during the summer between the first and second year. Many opportunities for internship positions, as well as part- and full-time jobs in planning at all levels of government, exist within the Richmond area. Upon request, the internship requirement may be waived for students with substantial professional experience.

## Curriculum

	credits
<b>First year, first semester</b>	
URSP 610 Introduction to Planning	3
URSP/GVPA 622 Community Socioeconomic Analysis using GIS	3
URSP 662 Foundations for Development Planning	3
Elective	3
<b>First year, second semester</b>	
URSP/GVPA 623 Research Methods in Government and Public Affairs	3
URSP/GVPA 632 Planning Theory and Processes	3
URSP 635 Legal and Legislative Foundations of Planning	3
Elective	3

### Internship

Normally taken between the first and second year of course work, but other options are available.

### Second year, first semester

URSP 761 Planning Studio I	3
GVPA 601 Principles of Public Administration	3
Electives	6

### Second year, second semester

URSP 762 Planning Studio II	6
Electives	3

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45

## Combined Master of Urban and Regional Planning (M.U.R.P.) and Juris Doctor (J.D.)

A cooperative arrangement with the T.C. Williams School of Law makes it possible for students to receive a law degree (J.D.) and an urban and regional planning degree (M.U.R.P.) in four years rather than the five years ordinarily required.

The purpose of the program is to integrate the two professional curricula and to provide the expertise necessary to apply legal analytical skills and planning methods and analysis to urban and regional policy issues and problems. The dual degree program is designed to equip graduates for a variety of professional positions, including staff for legislative committees and government agencies and commissions, government legal staff, private consulting, neighborhood advocacy, directorships of planning and related agencies, and executive aides to elected officials.

Interested students must apply separately for and be admitted to the T.C. Williams School of Law, University of Richmond, and the Master of Urban Studies and Planning program, VCU. Students will spend their entire first year in either the T.C. Williams School of Law or the L. Douglas Wilder School of Government and Public Affairs, and their second year in the program not selected in the first year. Twelve credit hours of the planning program will be applied toward meeting the graduation requirements of the law school, and 12 credit hours in the law school will be applied toward meeting requirements of the M.U.R.P. program.

Upon admission to the dual degree program, every student will be assigned an adviser in each program who will assist in planning the course of studies that will include all of the required courses in each program plus such elective courses as will best serve the interests of the individual student.

Students deciding not to complete the dual degree program must meet all of the regular requirements of either the J.D. or M.U.R.P. to receive the degree of their choice.

## Urban Revitalization, Certificate in (Postbaccalaureate graduate certificate)

### Admission requirements summary

#### Urban Revitalization, Certificate in (Postbaccalaureate graduate certificate)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Certificate	Fall Spring	Jul 20 Nov 30 (new deadlines)	

The urban revitalization certificate program requires 18 semester hours of course work and can be completed in one academic year. A sequence of introductory courses exposes students to the planning process, housing policy, historic preservation, commercial revitalization, adaptive reuse of

buildings and urban design. Course work in the area of urban revitalization is a blend of instruction in planning, urban design, business and economics.

## Admission requirements

Admission requirements include an official application; a letter of intent describing objectives in applying for the certificate; three letters of recommendation; two copies of an official transcript from an accredited institution showing undergraduate work and successful completion of an appropriate degree program with a minimum GPA of 2.7 (out of 4.0) in the last 60 semester hours of undergraduate study; demonstration of professional experience in planning or work related to the certificate program. The experience requirement may be waived for candidates who demonstrate professional promise. All credits earned are transferable to the Master of Urban and Regional Planning program.

## School of Mass Communications

The School of Mass Communications has three graduate programs: scholastic journalism, strategic public relations and advertising. The advertising program is offered through the VCU Adcenter.

### Administration

**Judy VanSlyke Turk**  
Professor and Director

### Admission requirements

All programs are open to graduates of accredited colleges and universities. Applicants must satisfy the general requirements for admission to graduate programs in the Graduate School and the College of Humanities and Sciences (see the [College of Humanities and Sciences](#) guidelines in this bulletin). In addition, they should hold a baccalaureate degree in an area appropriate to the program to which they are applying and a GPA that indicates the ability to pursue graduate work. Although the type of undergraduate degree is not critical to admission, the programs require approved undergraduate curricula or the equivalent in order to grant full admission.

## Mass Communications, Master of Science (M.S.) – Advertising

### Admission requirements summary

**Mass Communications, Master of Science (M.S.) – Advertising**  
Indicate specialization:

This program offers graduate studies in advertising at the VCU Adcenter. The program provides advanced preparation with concentrations in creative and strategic advertising development. The curriculum is divided into five tracks:

- art direction
- copywriting
- creative brand management
- creative media strategy (which includes media planning)

- strategy (which includes account planning and account management)

The working environment at the Adcenter is similar to an advertising agency: teams of student art directors, writers, strategists, media planners and brand managers work together to develop campaigns.

After the first year, qualified students are offered internships where they experience ad agency life and foster industry relationships. In their second year, students are given the opportunity to network through a mentoring program in which students are matched with agency professionals who offer advice and assistance.

### Admission requirements

In addition to the M.S. in Mass Communications general admission requirements, applicants to the advertising programs must submit:

- three recommendations from persons who are qualified to give information concerning the applicant's probable success in graduate school and in the field of advertising.
- 10 samples of nonreturnable work.
- a personal profile.
- other materials specified by the intended curricular track within the advertising program.

A full description of all Adcenter requirements is included in the VCU Adcenter Application kit, available on the Web at <http://www.adcenter.vcu.edu> or by calling the VCU Adcenter toll free at (800) 311-3341. Applications must be postmarked no later than June 1 prior to the fall semester for which admission is sought.

### Degree requirements

The master's program in advertising requires a minimum of 42 to 54 hours beyond the baccalaureate degree. Students devote two years of full-time study to complete the degree requirements. To graduate, students must present a final major project, in portfolio form, before a committee review panel.

All students in the advertising program must complete the following set of core courses:

Core curriculum	credits
MASC 601 Technology	1
MASC 625 Strategic Brand Concepts	3
MASC 650 Cultural Exploration and Communications	3
MASC 651 Creative Thinking for Advertising	3
MASC 655 Brand Campaigns	3
MASC 665 Building Brands in International Cultures	3
MASC/MRBL 677 The Business of Advertising	3
	<hr/> 19

### Art direction

### Admission requirements summary

Art direction			
Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S., Mass Communications	Fall only	July 31 (rolling admission)	
Special requirements:			
Contact the Adcenter for specific admission requirements. Call (800) 311-3341 toll-free.			

Specific requirements for each of the five advertising program tracks:

<b>Art direction curriculum</b>	credits
MASC 622 Visual Storytelling	3
MASC 630 Visual Concepts and Execution I	3
MASC 631 Visual Concepts and Execution II	3
MASC 652 Advertising Concept Development	3
MASC 653 Portfolio Development	3
MASC 657 Digital Media	3
MASC 664 Presentation Skills	1
MASC 696 Advanced Portfolio Development	3
MASC 699 Thesis	1
	<hr/> 23

## Copywriting

### Admission requirements summary

#### Copywriting

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S., Mass Communications	Fall only	July 31 (rolling admission)	
<b>Special requirements:</b> Contact the Adcenter for specific admission requirements. Call (800) 311-3341 toll-free.			

Specific requirements for each of the five advertising program tracks:

<b>Copywriting curriculum</b>	credits
MASC 622 Visual Storytelling	3
MASC 640 Conceptual Thinking in Copywriting	3
MASC 641 Conceptual Thinking in Copywriting II	3
MASC 652 Advertising Concept Development	3
MASC 653 Portfolio Development	3
MASC 657 Digital Media	3
MASC 664 Presentation Skills	1
MASC 696 Advanced Portfolio Development	3
MASC 699 Thesis	1
	<hr/> 23

## Creative brand management

### Admission requirements summary

#### Creative brand management

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S., Mass Communications	Fall only	July 31 (rolling admission)	
<b>Special requirements:</b> Contact the Adcenter for specific admission requirements. Call (800) 311-3341 toll-free.			

Specific requirements for each of the five advertising program tracks:

#### Creative Brand Management curriculum

	credits
ACCT 608 Managerial Accounting Concepts	3
MASC 629 Strategic Thinking	3
MASC 632 Introduction to Brand Management	3
MASC 658 Account Leadership	2
MASC 661 Media Research and Planning	3
MASC 662 Quantitative and Qualitative Research	3
MASC 667 Internal Brand Leadership	3
MASC 668 Creating Brand Products and Channels	3
MASC 690 Brand Management Creative Simulation	3
	<hr/> 26

## Creative media strategy

### Admission requirements summary

#### Creative media strategy

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S., Mass Communications	Fall only	July 31 (rolling admission)	
<b>Special requirements:</b> Contact the Adcenter for specific admission requirements. Call (800) 311-3341 toll-free.			

Specific requirements for each of the five advertising program tracks:

<b>Creative media curriculum</b>	credits
ACCT 608 Managerial Accounting Concepts	3
MASC 626 Digital Media Methods and Measurement	2
MASC 629 Strategic Thinking	3
MASC 653 Portfolio Development	3
MASC 658 Account Leadership	2
MASC 661 Media Research and Planning	3
MASC 663 Advanced Creative Media Planning	3
MASC 697 Portfolio Development for Strategists	3
MASC 699 Thesis	1
	<hr/> 23

## Strategy

### Admission requirements summary

#### Strategy

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S., Mass Communications	Fall only	July 31 (rolling admission)	
<b>Special requirements:</b> Contact the Adcenter for specific admission requirements. Call (800) 311-3341 toll-free.			

Specific requirements for each of the five advertising program tracks:

<b>Strategy curriculum</b>	credits
ACCT 608 Managerial Accounting Concepts	3
MASC 627 Visual Storytelling for the Strategist	2
MASC 629 Strategic Thinking	3



MASC 653 Portfolio Development	3
MASC 658 Account Leadership	2
MASC 661 Media Research and Planning	3
MASC 662 Quantitative and Qualitative Research	3
MASC 697 Portfolio Development for Strategists	3
MASC 699 Thesis	1
	<hr/> 23

## Mass Communications, Master of Science (M.S.) – Scholastic Journalism

### Admission requirements summary

#### Mass Communications, Master of Science (M.S.) – Scholastic Journalism

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S., Mass Communications	Fall Spring Summer	Jul 1 Nov 1 Mar 1	GRE-General

#### Special requirements:

Three recommendations. If endorsement or recertification for teaching journalism in a secondary school is sought, one recommendation must be from a school principal.

A letter detailing career goals and how the M.S. program in scholastic journalism applies to those goals.

The program in scholastic journalism is designed for secondary school teachers of journalism to prepare them for their role of training high school students and managing student publications, as well obtaining journalism endorsement and/or maintaining certification. This program consists of at least 35 credits, 17 of which are required courses in the School of Mass Communications. Two additional courses (six credits) are taken from sets of mass communications electives. The remaining nine credits are taken in courses external to the School of Mass Communications.

### Admission requirements

In addition to the M.S. in Mass Communications general admission requirements, applicants to the scholastic journalism program must submit:

- three recommendations from persons who are qualified to give information concerning the applicant's probable success in graduate school. If the applicant seeks endorsement or recertification for teaching journalism in a secondary school, one of these recommendation letters must be from a school principal.
- a letter detailing career goals and how the M.S. degree program in scholastic journalism applies to those goals.
- acceptable scores on the GRE.

Provisional admission may be granted under certain circumstances.

### Degree requirements

The master's program in scholastic journalism requires a minimum of 35 credit hours beyond the baccalaureate degree. The hours are divided as follows:

Core curriculum	credits
MASC 501 Journalistic Writing	4

MASC 502 Editing the News	4
MASC 624 Basic Photojournalism	3
MASC 607 Student Press Law Rights and Responsibilities	3
MASC 613 Mass Media and Society	3
	<hr/> 17

<b>One of the following two courses</b>	3
MASC 519 Journalism in the Schools	
MASC 520 Advising Scholastic Publications	

<b>Six credits from the following courses</b>	6
MASC 603 Scholastic Yearbooks	
MASC 604 Broadcasting in High Schools	
MASC 605 Technology in the Classroom	
MASC 606 Contemporary Newspaper Design	
MASC 611 Research Methods in Mass Communications	
MASC 612 Mass Communications Theory	
MASC 691 Topics in Mass Communications	

<b>Nine credits from courses outside of the School of Mass Communications</b>	9
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**Thesis in lieu of required standardized comprehensive exams only by permission of the Graduate Committee** 0-3

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35-38

All candidates must establish a three-member examination/thesis committee by the third full-time semester or equivalent. The candidate must nominate a chair and a second member from the School of Mass Communications graduate faculty along with a third member from the graduate faculty outside of the School of Mass Communications.

## Mass Communications, Master of Science (M.S.) – Strategic Public Relations

The program in strategic public relations is designed for experienced public relations practitioners to prepare them to function at the highest levels of communications management and apply sophisticated strategic thinking to the accomplishment of organizational objectives. This program consists of at least 30 credits, 24 of which are required courses in the School of Mass Communications. Two additional courses (six credits) are taken in a collateral area of nonprofit management, environmental policy or global marketing management.

### Admission requirements

In addition to the M.S. in Mass Communications general admission requirements, applicants to the strategic public relations program must submit:

- three recommendations from persons who are qualified to give information concerning applicant's ability for the specific program of study proposed (including both academic and professional references). At least one professional recommendation must be from someone in the field of public relations.
- transcripts of all previous college work. Applicants must have appropriate baccalaureate background in public relations or related area. Applicants who have not completed the minimum baccalaureate coursework will be required to take 12 additional undergraduate hours before starting the program. Baccalaureate coursework must include, at minimum, introduction to public relations, public relations writing, public relations research and public relations campaigns. Recognized

professional accreditation (e.g. APR, ABC) may be accepted in lieu of baccalaureate public relations coursework.

- a detailed resume showing work experience in public relations. Applicants should have at least two years of appropriate professional level experience. Students who do not have at least two years of appropriate experience are required to earn three additional hours of credit in a professional level practicum for a total of 33 semester hours of credit for the degree. The practicum will be a minimum of 300 hours.
- a letter detailing strategic public relations career goals.
- acceptable scores on the GRE General Test.
- TOEFL (or comparable) scores for international applicants without a degree from an English-language university.

## Degree requirements

The master's program in strategic public relations requires a minimum of 30 credit hours beyond the baccalaureate degree. The hours are divided as follows:

Core curriculum	credits
MASC 671 Strategic PR in a Digital Environment	3
MASC 672 Strategic PR Research and Evaluation	3
MASC 675 Strategic PR Management	3
MASC 676 Public Relations Ethics and Law	3
MGMT 651 Organizational Communication	3
MASC 682 Strategic Media Relations	3
MASC 683 Strategic PR in the Global Environment	3
MASC 694 Strategic PR Campaign Design and Implementation	3
	<hr/> 24
Six credits from approved graduate courses in collateral area	6
	<hr/> 30

## Media, Art, and Text, Doctor of Philosophy (Ph.D.)

### Admission requirements summary

#### Media, Art, and Text, Doctor of Philosophy (Ph.D.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall	Mar 15	GRE-General

#### Special requirements:

Writing sample for all applicants. Portfolio for students wanting to take studio courses at graduate level.

This interdisciplinary Ph.D., a collaboration between the Department of English, the School of the Arts and the School of Mass Communications, is a 42-credit program of core and elective courses, seminar experiences and creative work, and a strong research component in the form of a dissertation project and defense.

The MATX Ph.D. program focuses on new media while also retaining both a historical and a theoretical dimension by encouraging the reassessment of the production, dissemination and employment of "traditional" literary texts, works of art and other kinds of texts, while in turn studying how these texts function within specific settings informed by gender, ethnicity, race and other cultural factors. The course of study in the Ph.D. also extends its reach to film and new media, television, and advertising, addressing the growing need for the study of virtual and visual texts. The program is not limited to one department or discipline within the participating units.

Rather, it breaks down "disciplinary walls" in order to cultivate the research possibilities available to students, allowing them to fashion new intellectual areas for the creation and dissemination of knowledge.

### Admission requirements

The purpose of the admission requirements for the Ph.D. program in Media, Art, and Text is to assure the selection of outstanding students whose motivations, ability, education, and interests prepare them for interdisciplinary graduate study.

The following are required for admission to the program:

- A master's degree from an accredited institution in an area appropriate to the study of textual, verbal, interdisciplinary studies or visual art. Such degrees could include but not be limited to studies in the humanities, fine arts, art education, communication or advertising. Candidates must have a minimum GPA of 3.0 in post-undergraduate studies.
- A candidate who plans to work in the studio arts also will need to submit a portfolio of at least 20 slides or equivalent of past work that demonstrate their ability to do graduate-level work.
- All candidates must submit a writing sample that demonstrates the ability to write clearly, analyze effectively and perform graduate-level seminar work.
- Satisfactory scores on the Graduate Record Exam.
- For applicants whose native language is not English, satisfactory scores from a standardized test commonly used and deemed appropriate for evaluation of English language proficiency, such as the TOEFL.
- Letters of recommendation from three present or former instructors or other individuals qualified to evaluate the applicant's ability to engage in interdisciplinary graduate study in media, art and text.
- A written personal statement describing the applicant's interest, motivation, education and goals in pursuing this degree. In this statement, the applicant needs to speak specifically to the importance of interdisciplinarity to his or her academic goals and also offer evidence of his or her suitability to pursue such a degree.

### Curriculum

The 42-hour curriculum of the Ph.D. program in Media, Art, and Text is designed to foster an intellectual, creative and artistic environment in which students from different disciplines can work collaboratively and independently to develop and disseminate knowledge in this emerging field.

### Core curriculum

The first year has 12 hours of shared course work that is required of all candidates and six hours of core electives. The courses include:

	credits
<b>First year</b>	
<b>Fall</b>	
MATX 601 Texts and Textuality	3
MATX 602 History of Media, Art, and Text	3

Elective (research methods or theory course from approved list below) within the core 3

### Spring

MATX 603 History of Multimedia and Interdisciplinarity 3

MATX 604 Production and Application Workshop 3

Elective (research methods or theory course from approved list below) within the core 3

### Approved electives in the first year

#### Theory courses

ARTH 571 Advanced Studies in Film Theory

ARTH 555 Advanced Studies in Aesthetics and Art Theory

ENGL 531 Literary Theory

ENGL 637 Theories of Rhetoric and Composition

MASC 612 Mass Communications Theory

MASC 613 Mass Media and Society

PAPR 527, 528 Art and Critical Theory

THEA 510 Theatre Historiography

THEA 603 Dramatic Literature and Theory

THEA 604 Modern Theatre: Theory and Practice

#### Research methods courses

ARTE 690 Issues and Methods of Inquiry in Art Education

ARTH 590 Art Historiography and Methodology

ENGL 530 Introduction to Scholarship in English Studies

MASC 611 Research Methods in Mass Communications

THEA 510 Theatre Historiography

## Second year

### Fall

9 hours of graduate electives 9

### Spring

9 hours of electives and study credits to prepare for spring exams and to write a project proposal. By the end of the spring semester, candidates should have completed their comprehensive exams. By the end of the spring semester, candidates should also have their project proposal completed and approved.

Students will be required to take 18 hours in elective courses. In addition to MATX 690, the following 500- and 600-level seminars also may be used for elective credits. Students are advised to choose courses that directly relate to their research and creative work. Students must meet the prerequisites for these courses either through their previous course work, previously earned degrees or comparable demonstration of mastery needed for the course.

### Approved electives in the second year

ARTE 501-502 Concepts in Art Education

ARTE 520 Teaching Concepts Through the Arts

ARTE 553 Art and Perceptual Communication

ARTE 592, 692 Independent Study in Art Education

ARTE 600 Seminar: Issues in Art Education

ARTE 611, 612 Literature in Art Education

ARTE 665 Curriculum Development and Evaluation

ARTE 670 Technology in Art Education

ARTE 680 Teaching Laboratory

ARTE 691 Topics in Art Education

ARTH 555 Advanced Studies in Aesthetics and Art Theory

ARTH 556 Advanced Studies in Ideas and Criticism in Art

ARTH 569 Advanced Studies in Museum Methods

ARTH 571 Advanced Studies in Film Theory

ARTH 574 Advanced Studies in Film

ARTH 759 Seminar in Aesthetics, Theory and Criticism of Art and Architecture

ARTH 761 Seminar in Latin American Renaissance Art and Architecture

ARTH 762 Seminar in Latin American 17th- and 18th-century Art and Architecture

ARTH 789 Problems in Advanced Art and Architectural History

ARTH 791 Topics in Early Modern Art

CRAF 690 Graduate Seminar

ENGL 532 Applied English Linguistics

ENGL 553 Studies in Linguistics

ENGL 611 The Writer in His Own Time

ENGL 614 Major Works of Literature

ENGL 617 Major Literary Modes

ENGL 620 Patterns in Literary Thought

ENGL 624 Literature in Society

ENGL 627 Literary Genre

ENGL 652 Studies in Writing and Rhetoric

ENGL 661 Themes in Interdisciplinary Studies

ENGL 670 Literary Editing and Publishing

ENGL 672 Writing Nonfiction

GDES 621 Visual Communications Seminar

PAPR 690 Graduate Seminar

PHTO 690 Seminar in Photography and Film

MASC 605 Technology in the Classroom

MASC 611 Research Methods in Mass Communications

MASC 612 Mass Communications Theory

MASC 613 Mass Media and Society

MASC 620 Seminar in Mass Communications History

MASC 623 Ethics and Law in Mass Communications

MASC 624 Basic Photojournalism

MASC 691 Topics in Mass Communications

MHIS 615 Seminar in Music Theory

MHIS 650 Seminar in Music History

MUED 600 Seminar in Music Education

SCPT 517 Seminar in Contemporary Sculpture

SCPT 591 Topics in Sculpture

SCPT 690 Graduate Seminar

THEA 603 Dramatic Literature and Theory

THEA 604 Modern Theatre: Theory and Practice

THEA 623 Advanced Studies in Modern Drama

THEA 624 Advanced Studies in Modern Drama

THEA 791 Seminar in Special Issues in Theatre

## Degree requirements

Candidates for degrees are eligible for graduation upon completion of all academic requirements in effect at the time of their first registration, provided the students are continuously enrolled and provided the requirements are met within the specified time frame.

## Credit requirements

Students are required to complete 42-credit hours in core and elective courses and to conduct research or produce significant work within the participating disciplines. The core course work will be completed with courses offered through Media, Art, and Text, but the additional elective courses may draw from both seminars offered through Media, Art, and Text, and approved seminars offered in participating units.

## Grade requirements

To graduate, degree applicants must achieve an overall grade-point

average of 3.0 ("B") on a 4.0 scale with a grade of "C" in no more than two courses. The GPA for graduation will be based on all graduate courses attempted after acceptance into the program.

### Admission to candidacy for Ph.D. degree

Before admission to candidacy for the Ph.D., students must have completed all required course work, successfully completed a comprehensive examination and fulfilled the requirement for demonstrated competencies.

#### Requirement for demonstrated competencies

In addition to the core courses and electives selected from the curricular offerings, students must also demonstrate competencies in two areas:

1. All students must achieve competency by demonstrating mastery in computer-based media, leading to the creation and maintenance of an e-portfolio. This portfolio will be a component of the core courses in the program. When presented to demonstrate competency, the e-portfolio will be accompanied by a theoretical argument or justification.
2. Students and their dissertation committees will determine a second area of competency and the manner in which it will be fulfilled. This second competency will be integral to the interdisciplinarity of the student's course of study. Such areas might include but not be limited to foreign language (recommended for students with art history focus), rhetoric, socio-linguistics, statistics, research methods in ethnography or other specializations, or arts administration/management.

These requirements must be met by the time of the qualifying exam (e.g., not later than the end of the third semester of the program).

#### Qualifying examination

Upon completion of all required course work, student will take a written qualifying examination. Exams have two components: one that covers material from the core curriculum and a second related to the candidate's specific focus area. The exam will be written by the Graduate Studies Committee. The first portion of the exam, based on the core curriculum, will be the same for all students. The second portion will be based on a bibliography compiled by the candidate and his or her project adviser. The second portion of the exam is integral to the candidate's project proposal discussed in the section entitled "dissertation research."

## School of World Studies

On May 16, 2003, the Board of Visitors of Virginia Commonwealth University approved the creation of the School of World Studies within the College of Humanities and Sciences. The School of World Studies is a relatively unique entity within American higher education that builds on the strengths of existing disciplines in the humanities and the social sciences to provide its students with the knowledge, skills and experience necessary for success in an increasingly interdependent, globalized 21st century. The school will stimulate programs with an international focus across the campuses and develop close ties with such programs as African American Studies, Women's Studies, English, History and other units throughout the university. The school includes programs formerly offered by the Foreign Languages Program, the International Studies Program, the Anthropology Program and the Division of Religious Studies. Although the programs currently encompassed by the school are primarily at the undergraduate

level, the new school will actively foster and promote a wide range of endeavors, including the establishment of interdisciplinary graduate programs. At the current time, the participating programs offer a select number of graduate courses.

### Administration

312 N. Shafer St.  
P.O. Box 842021  
Richmond, VA 23284-2021  
(804) 828-1026  
Fax (804) 827-3479  
<http://www.has.vcu.edu/wld>

**R. McKenna Brown**  
Director

**Christina Turner**  
Director of Undergraduate Programs

## Center for Public Policy

The Center for Public Policy focuses the university's multidisciplinary efforts in public policy. As a comprehensive, university-wide center, the center has responsibilities in each area of the university's broader missions: teaching, research and public service. The center houses and administers the Ph.D in Public Policy and Administration.

The center conducts basic and applied research on a number of public policy matters, with special attention to health policy, urban and metropolitan development, and state and local government and politics. And, the center engages in significant service through its training programs, conferences, publications and other contributions to public discourse.

### Administration

919 W. Franklin St.  
P.O. Box 843061  
Richmond, VA 23284-3061  
(804) 828-6837  
Fax (804) 828-6838  
<http://www.vcu.edu/cppweb>

**Robert D. Holsworth**  
Director, Center for Public Policy

**Michael D. Pratt**  
Interim Director, Ph.D. in Public Policy and Administration

## Public Policy and Administration, Doctor of Philosophy (Ph.D.)

**Michael D. Pratt**  
Interim Director, Ph.D. in Public Policy and Administration

The purpose of the Ph.D. in Public Policy and Administration program is to prepare students for scholarly and leadership roles in government, universities, research organizations and other settings where knowledge and research skills in public policy and administration are needed. The doctoral program is committed to accomplishing this mission by creating an intellectually vibrant atmosphere for scholarship involving an active faculty from a broad spectrum of academic disciplines and substantial interaction with government agencies and community groups.

The Ph.D. in Public Policy and Administration is a degree program of the university's Center for Public Policy. The center was established to serve as the focus of the university's interdisciplinary efforts in teaching, research and service related to public policy. The center, as well as the doctoral program, is designed to involve faculty and academic units from across the university.

## Faculty

Faculty for the doctoral program are drawn from graduate faculty across the university. A list of participating faculty and academic units is available from the program office.

## Admission requirements

Admission is open to qualified persons without regard to age, physical disability, national origin, race, religion or gender. Admission is competitive since it is limited by the number of places available. The admission process is intended to assure a reasonable fit between the student's professional and research interests and faculty expertise. Consequently, otherwise qualified applicants may be denied admission.

Applicants to the program must hold a master's degree or a recognized postbaccalaureate degree in one of the professions such as law or medicine from an accredited institution of higher education. A standardized test score, fewer than five years old, is required. Accepted examinations include the Graduate Record Examination (GRE), the Graduate Management Admissions Test (GMAT) and the Law School Admissions Test (LSAT). Professional experience is not required, but is considered desirable.

In order to apply for admission to the Ph.D. in Public Policy and Administration program, prospective students must submit:

- a VCU Application for Graduate Study,
- transcripts from all previous colleges or universities,
- scores from a standardized examination (GRE, GMAT or LSAT),
- three letters of reference,
- a personal statement describing reasons for applying to the program and
- a current professional resume.

International applicants must submit the International Application and TOEFL scores. All students admitted to the program must have completed prior to admission, or are required to complete during their first year, the following graduate-level courses (or their equivalent):

- research methods (equivalent of PADM 623),
- statistics (equivalent of PADM 624) and
- public policy, economics or administration/management.

The primary admissions deadline is March 15 for enrollment to begin the following fall semester. However, for those students wishing to be considered for a limited number of fellowships, materials must be received no later than Jan. 15. A small number of special admissions may be made in the fall (Oct. 15 application deadline) for entry the following spring semester. Applicants who wish to be considered for the Oct. 15 deadline must include a letter requesting and justifying early admission. If the request for early consideration is not accepted, the application will be held over to the March 15 application date.

While university rules allow up to six credit hours of course work to be taken as a special student prior to formal admission, taking such courses in no way guarantees admission to the program. Graduate courses designated "doctoral students only" may not be taken prior to formal admission, although they may be taken by fully admitted doctoral students in other programs.

Application packets may be obtained from the program office or the Graduate School. International applicant materials are available from the International Admissions Office.

## Degree requirements

The doctoral program is structured around a core curriculum and several areas of concentration. The curriculum is designed to provide a sound intellectual foundation for the pursuit of theoretical and applied research in administrative and policy studies. The program includes courses in public policy and administration, research methods, public policy economics, political and organizational process, and law and public policy.

In addition to the core, the program offers three concentration areas including health policy, public management in state and local government and nonprofits, and urban policy.

These concentrations offer students the opportunity to build a tailored program of study within a broad area of scholarship. The range of core and affiliate faculty expertise, from both campuses at VCU, gives doctoral students considerable flexibility in designing their studies and research.

Students take a minimum of 36 credits, or 12 courses, in addition to any prerequisites that might be necessary. Seven of these courses are part of the core and five are concentration courses. Required courses generally will be available on an evening or weekend schedule.

Course work in the Ph.D. program has a strong orientation toward research, both applied and theoretical. Where appropriate, course work may be linked to funded university projects or to external agency-based analytical work. Courses emphasize research, writing and presentation skills.

### Core curriculum

PPAD 711 Seminar in Public Policy and Administration I  
 PPAD 712 Seminar in Public Policy and Administration II  
 PPAD 791 Law and Public Policy  
 PPAD 715 U.S. Political Processes and Institutions  
 PPAD 716 Public Policy Economics  
 PPAD 721 Survey of Applied Research Methods in Public Policy and Administration  
 PPAD 722 Survey of Data Analysis Techniques for Public Policy and Administration

### Concentrations

In addition to the core, all students will take five courses in their selected area of concentration. Each concentration features a required seminar as one of these courses.

- **Health policy:** PPAD 730 Seminar in Health Policy
- **Public management in state and local government:** PPAD 740 Seminar in Public Management
- **Urban policy:** PPAD 750 Seminar in Urban Policy

The remaining four courses will be selected from a list designated by the

concentration committee for each area. At least one of these must be a methodologically oriented course relevant to the student's area. The concentration committee will approve the program of study for each student in the concentration.

### Qualifying examinations

After completing all of the core courses in the Ph.D. program, each student takes a comprehensive qualifying examination on the core. The examination is designed to evaluate the mastery students have achieved over the body of knowledge represented by the core. It is intended to measure the ability of students to organize, integrate and creatively apply the knowledge in the field to important problems. Although organized around the courses in the core, the examination is not restricted to material covered in those courses. It is expected that doctoral students will read well beyond the confines of individual courses.

In order to continue in the program, students must attempt the qualifying examination no later than the next regular semester following their completion of the core course requirements, and they must pass the exam by the end of the second regular semester after completing the core course requirements. A student may attempt the examination twice. Examinations are offered twice per year.

A student also must take a comprehensive examination in the concentration. Each student, under the direction of the adviser, will prepare a reading list on the concentration or on a significant portion thereof. The student will then take an oral examination with his or her adviser based upon the reading list. A student may attempt the examination twice. Exams are scheduled at the convenience of the student and the adviser. Each student must pass this second examination before defending a dissertation proposal.

### Dissertation

After completing the qualifying examination and course work for the concentration, students must prepare a dissertation involving original research that contributes to the body of knowledge in the field. A committee approved by the director of the program supervises the dissertation work. The chair of the committee must be a core or affiliate faculty member of the Ph.D. program.

The first formal step in the dissertation process is the development and defense of a dissertation prospectus that frames the problem to be studied, provides background on the problem, presents a review of relevant literature and justifies the methodology to be used. The defense of the prospectus as well as the completed dissertation must be done orally to the dissertation committee. The dissertation defense is conducted in a forum open to other students and to faculty.

### Continuous enrollment requirements and expectations

To remain in good standing, students must maintain continuous registration for each fall and spring semester (except for official leaves of absence) until they have completed all requirements, including the dissertation. Students are required to enroll for a minimum of nine semester hours each calendar year. Once a student has completed all course requirements and passed the comprehensive examinations, he/she may maintain continuous enrollment of three credits of dissertation research per year. A minimum GPA of 3.0 on a 4.0 scale must be maintained. VCU currently requires registration for a defined credit hour level during both the didactic and research phases of advanced degree training. There is no obligatory linkage between the accumulation of credit hours and an expectation that a degree be awarded. As a guide to

monitoring the timely completion of the degree within the present enrollment framework, the accumulation of 180 credits for a doctor of philosophy degree can be taken as a reasonable measure. Compliance with other relevant university regulations also is required.

While the university provides an array of computing facilities, most students find it desirable to have personal access to computing capacity, including Internet connection. The primary mode of communication between the program office and students is through the Internet and e-mail. Several classes use computer-based interactive technology such as newsgroups.

## Department of Biology

The Department of Biology offers programs leading to both master's and doctoral degrees; the doctoral degree is offered through the Integrative Life Sciences program. Students may specialize within many areas, such as molecular and cellular biology, genetics, aquatic and terrestrial ecology, systematics, physiology, neurobiology, and developmental biology. Students also may develop an interdisciplinary focus to their degree program, for example within areas such as bioinformatics, cancer biology, forensic science and environmental science.

In addition to the courses offered by the Department of Biology, graduate students may enroll in graduate courses offered through VCU Life Sciences and these departments at the VCU Medical Center: Anatomy and Neurobiology, Biochemistry, Biostatistics, Human Genetics, Microbiology and Immunology, Pathology, Pharmacology and Toxicology, and Physiology. Visit the Department of Biology's Web site: <http://www.has.vcu.edu/bio>.

### Administration

**Leonard A. Smock**  
Professor and Department Chair

## Biology, Master of Science (M.S.)

### Admission requirements summary

#### Biology, Master of Science (M.S.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.	Fall	Mar 1 (for priority financial aid consideration)	GRE-General
	Spring	Nov 15	
	Summer	May 1	

The Department of Biology offers programs leading to a Master of Science degree. Areas of specialization include molecular and cellular biology, terrestrial and aquatic ecology, systematics, and physiology and developmental biology. In addition to the courses offered by the department, graduate students may request departmental permission to enroll in graduate courses offered at the VCU Medical Center in the departments of Anatomy, Biochemistry and Molecular Biophysics, Biostatistics, Human Genetics, Microbiology and Immunology, Pathology, Pharmacology and Toxicology, and Physiology.

### Admission requirements

In addition to the general requirements for admission to the Graduate School, the following requirements of the Department of Biology represent the minimum acceptable standards for admission:

- bachelor's degree in biological or related science or equivalent
- appropriate college-level background in mathematics, chemistry and physics
- three letters of recommendation pertaining to the student's potential ability as a graduate student in biology
- student's written statement concerning career and research interests
- transcripts of all previous college work
- satisfactory scores on the GRE (general test)

Most entering graduate students in the Department of Biology have a 3.0 GPA or above on undergraduate work and a combined score of 1,000 or more on the verbal and quantitative sections of the GRE. Students who do not meet the minimum entrance requirements, but nevertheless wish to pursue an advanced degree in biology, are encouraged to contact the director of the graduate program in biology to discuss their interests and concerns. Admission on a provisional basis may be possible for students lacking the necessary requirements for full admission. Deficiencies must be removed by the end of the first year of residence. Courses that are remedial or designed to remove deficiencies will not be accepted toward the fulfillment of the course requirements for the master's degree.

## Degree requirements

Master of Science degree candidates are required to take a minimum of 30 semester credits, which shall include the following specifications:

- nineteen credits must be courses designated exclusively for graduate students
- a minimum of two and a maximum of four credits must be BIOL 693 Current Topics in Biology
- a minimum of six and a maximum of nine credits must be BIOL 698 Thesis
- at least five lecture or lecture laboratory courses must be taken from at least three different instructors (excluding Thesis, Research Seminar and Independent Study)

All graduate students are required to write a thesis proposal and a formal thesis following a prescribed format. The thesis proposal must be approved by the student's graduate committee and the chair of the department to initiate thesis research. At the earliest possible opportunity, students must take STAT 543 or an equivalent statistics course approved by the student's graduate committee. Students entering the program with a statistics background equivalent to STAT 543 may petition the Biology Department Graduate Academic Committee to have this requirement waived.

A maximum of six semester hour credits from graduate work taken at other institutions may be transferred if they meet approval of the department.

Receipt of a grade of "C" or lower in two courses constitutes automatic dismissal from the graduate program in biology. Courses with a grade of "C" or lower cannot be applied to satisfying the degree requirements.

Each student will be required to pass a final examination, which will be primarily a defense of the thesis.

Continuous enrollment in the graduate program is required. Interruption in continuous enrollment for any reason without a leave of absence approved by the director of the graduate program in biology will require that students reapply to the Department of Biology Graduate Academic Committee.

## Integrative Life Sciences, Doctor of Philosophy (Ph.D.)

### Admission requirements summary

#### Integrative Life Sciences, Doctor of Philosophy (Ph.D.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall (preferred) Spring Summer	Feb 1	GRE
Special requirements: See program <a href="#">Web site</a>			

The Ph.D. in Integrative Life Sciences is designed for students who want to conduct research that is integrative across multiple disciplines and that takes a systems approach to emerging research questions across the many fields that comprise the life sciences. Students may opt to work with faculty members from departments on both campuses. The program provides the opportunity to conduct interdisciplinary research at multiple scales of study from the molecular to ecosystem levels with an emphasis on the concepts of systems biology and biological complexity.

### Admission requirements, procedures and financial aid

The purpose of the admission requirements for the Ph.D. program is to ensure selection of outstanding students whose motivation, ability and education prepare them for interdisciplinary graduate study in the life sciences. The following requirements and procedures incorporate those of the [VCU Graduate School](#).

1. Admission requirements
  1. Graduation from an accredited college or university or its equivalent, with a degree in a discipline, a spectrum of course work, and/or professional experience that provides an appropriate background for graduate-level study in the life sciences.
  2. An undergraduate or graduate record indicating superior performance. Applicants must have a minimum GPA of 3.0 on a 4.0 scale for at least the last 60 credits of undergraduate work or for a completed graduate degree. In very unusual cases, this requirement may be waived by approval of the dean of the Graduate School.
  3. Satisfactory scores on the Graduate Record Examination. Scores for appropriate advanced tests, in particular biology, chemistry or molecular biology/biochemistry, are recommended.
  4. For applicants whose native language is not English, satisfactory scores from a standardized test commonly used and deemed appropriate for evaluation of English language proficiency, such as the TOEFL.
  5. Letters of recommendation from three present or former instructors or other individuals qualified to evaluate the applicant's ability to engage in graduate study in the life sciences.



6. A written statement describing the applicant's interests, motivation, education and goals for pursuing graduate study in the life sciences.
2. Admission procedure
    1. The above material must be sent along with a completed application form and the required application fee to the Graduate School, Virginia Commonwealth University, Richmond, VA 23284-3051. Application forms and further information can be found on the Graduate School's Web page at <http://www.vcu.edu/graduate>.
    2. Applicants may apply for admission to begin studies any semester of the year, but fall admission is recommended. Admission to graduate study in integrative life sciences requires majority approval and recommendation by the Graduate Program Committee and acceptance by the vice provost for Life Sciences and the dean of the Graduate School.
  3. Types of admission
    1. Degree-seeking student: An applicant who meets all requirements for admission to the program.
    2. Provisional student: An applicant who has not fully met the requirements of the program but shows exceptional promise. Applicants with outstanding potential but who lack courses or training in specific areas deemed necessary for success in the program may be required to complete specific course work. Provisionally accepted students must remove all conditions of the provisional admission within one year of enrollment. Failure to meet these conditions will result in the student being dismissed from the program. No prerequisite courses taken as a provisional student may be applied toward the graduate degree.
  4. Financial aid. In addition to need-based financial aid awarded through the Office of Financial Aid, students may be eligible to be considered for a variety of scholarships, fellowships, and teaching and research assistantships. Information regarding available financial support will accompany an offer of acceptance.

## Degree requirements

Students are required to complete course work in core and elective courses and to conduct significant research. All work toward the degree must be completed within seven years of the first enrollment.

1. **Credit requirements.** Students in the program are required to earn a minimum of 64 hours of graduate-level credits. At least one-half of the credit hours presented for graduation must be at the 600 level or higher.
2. **Grade requirement.** Degree applicants must achieve an overall GPA of 3.0 ("B") with a grade of "C" in no more than two courses. The GPA for graduation is based on all graduate courses attempted after acceptance into the program.
3. **Transfer and M.S. credits.** Graduate-level course work taken in another program at VCU or at another institution, shall be evaluated to determine whether it can be used to fulfill degree requirements of this program. There is no limit to the number of credits that can be transferred from another program at VCU as long as they have not been previously applied toward another degree. A maximum of six credits earned at another institution can be accepted for transfer into the program if not previously applied toward another degree. A

minimum grade of "B" is required for credits transferred.

4. **Research adviser and committee.** New students entering the program may be initially advised by an advisory committee of faculty members to assist students with initial course selection and to provide advice concerning the program. Students should select a research adviser prior to their third semester of study. The research adviser may be chosen from among the many graduate faculty members associated with this program from either campus.

Students are required to form a research advisory committee that is headed by the research adviser and consists of a minimum of five members of the VCU graduate faculty. Individuals who are not graduate faculty members (i.e. individuals from another institution or industry) must apply to the dean of the Graduate School for temporary membership. The significant areas of the student's research focus should be represented by the members of the research advisory committee. At least two members of the committee shall be from departments other than that of the research adviser, with one of those members being integrally associated with the student's research to foster the interdisciplinary intent of this degree program. Students should form their committee no later than the end of their third semester of study.

5. **Written and oral examinations.** Before admission to candidacy for the Ph.D. degree, students must successfully complete a comprehensive written examination and an oral examination. The student's research advisory committee will administer both exams. Students should take the written exam upon completion of all required didactic course work. It will focus on material covered in core and selected elective courses as well as fundamental knowledge relevant to the student's research field. Upon successful completion of the written examination and submission and acceptance of a research proposal, students should take an oral examination that includes a defense of the proposed research project and other subject areas deemed appropriate by the committee. Students may retake the written and oral examinations only once.
6. **Dissertation research.** The dissertation research project should represent a significant contribution to the body of knowledge in its field and should be deemed suitable for publication in refereed journals. The emphasis of the research conducted by students in this program should be on interdisciplinary research, incorporating two or more disciplines and with a systems approach. Research projects may take advantage of the many research opportunities across the life sciences on both campuses. Projects may encompass multiple scales of study from molecular to ecosystem levels. Students shall prepare a written dissertation describing the completed research using the format approved by the Graduate School. An oral defense of the dissertation, under the direction of the research advisory committee and open to all faculty members, also is required. Upon successful completion of all degree requirements, students will graduate with the Ph.D. in Integrative Life Sciences.

## Curriculum requirements

A minimum total of 64 credits is required and is distributed as follows:

- 12 credits in core courses
  - LFSC 510/ BIOL 545 Biological Complexity
  - LFSC 520/BIOL 548 Bioinformatic Technologies
  - LFSC 630 Integrative Life Sciences Research



LFSC 690 Research Seminar in Integrative Life Sciences  
MICR 510 Scientific Integrity

- a minimum of three credits in an advanced statistics, advanced mathematics or experimental design course depending on the students area of research\*  
BIOL 606 Quantitative Ecology  
BIOS/STAT 523 Nonparametric Statistical Methods  
BIOS 524 Biostatistical Computing  
BIOS 572 Statistical Analysis of Biomedical Data  
BNFO/BIOL 601 Integrated Bioinformatics  
ENVS 603 Environmental Research Methods  
LFSC 610 Analytical Methods in Biocomplexity Analysis  
MATH 591 Topics in Mathematics: Mathematical Biology  
MATH 617 Applied Mathematics I  
STAT/BIOS 544 Statistical Methods II  
STAT 623 Discrete Multivariate Analysis  
STAT 643 Applied Linear Regression  
Other courses based on approval of research advisory committee
- a minimum of nine credits in elective courses based on research interest and approved by research advisory committee
- a minimum of 40 credits in directed research (LFSC 697)

\* Students are expected to enter the program with a proficiency in statistics at the introductory level, as exemplified by STAT/BIOS 543 Statistical Methods. Students not at this level, as evidenced by prior course work, will be required to take STAT/BIOS 543 or an equivalent course.

## Department of Chemistry

The Department of Chemistry offers programs leading to the Master of Science and Doctor of Philosophy degrees. The programs provide opportunities for concentrated study in analytical, inorganic, organic, polymer or physical chemistry, or chemical physics. A plan of study is worked out for each student to ensure a sound basis for research. In keeping with the university's commitment as an urban institution, the department also offers part-time programs leading to these degrees. Refer to the department's Web site for more information:  
<http://www.has.vcu.edu/che>.

### Administration

**Nicholas P. Farrell**  
Professor and Department Chair

### Admission requirements

In addition to the general requirements for admission to graduate programs in the Graduate School and the College of Humanities and Sciences, students are expected to have a bachelor's degree from an accredited college or university with 30 semester credits in chemistry. Admission on a provisional basis is possible for a student temporarily lacking this expected chemistry background. Acceptance is based upon undergraduate performance, satisfactory scores on the GRE and letters of recommendation.

Graduate students in the Department of Chemistry may receive financial support via teaching or research assistantships or fellowships. Application forms and instructions for applying to all graduate programs are available on the Graduate School Web site at <http://www.vcu.edu/graduate>.

### General degree requirements

Entering graduate students are required to take proficiency examinations in analytical, inorganic, organic and physical chemistry. These examinations are at the level of sound undergraduate courses and are offered preceding the start of the school's fall semester, the start of the spring semester and after the spring semester ends. These tests are used to evaluate the student's strengths and weaknesses, and the student's program is planned accordingly.

## Chemistry, Doctor of Philosophy (Ph.D.)

### Admission requirements summary

#### Chemistry, Doctor of Philosophy (Ph.D.)

Indicate specialization:

Analytical, Inorganic, Organic, Physical or Chemical Physics

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall Spring	Mar 15 Nov 15	GRE

Students seeking the Doctor of Philosophy degree must demonstrate competency in analytical, inorganic, organic and physical chemistry. Students who do exceptionally well in the proficiency examinations may, by decision of the chemistry faculty, be considered to have demonstrated the necessary competency. The proficiency examinations may be repeated and must be completed by the end of the second semester of study.

Students preparing for the Doctor of Philosophy degree must have a minimum of 18 credits in eight graduate courses, not including credit for seminar or research. Credits must include three of the core courses (9 credits) selected from the four areas listed in the master's requirements. Other graduate courses to be taken will be determined in consultation with the faculty research adviser and the faculty of the Department of Chemistry. Students are expected to participate in the department's seminar program and present at least two formal talks in the seminar program. In addition to course work and seminar, the doctorate requires a minimum of 30 credits in CHEM 697 (directed research), and the total of all credits must be at least 60.

The student is required to complete written and oral examinations in his/her major field to become a doctoral candidate. The oral examination includes the presentation and defense of the proposed dissertation research. The student must conduct a substantial original investigation under the supervision of his/her adviser and must prepare a dissertation reporting the results of the research and analyzing its significance in relation to existing scientific knowledge. An oral defense of the dissertation will be held. Full-time students should complete the degree requirements in four to five years.

### Chemical physics track

Students entering the chemical physics program must pass proficiency examinations in two areas of chemistry and two areas of physics (mechanics, electricity and magnetism). Students entering with a bachelor's or master's degree in chemistry who have not taken the courses previously may satisfy the physics requirement with an "A" or "B" in PHYS 301, 302 and 376. Students entering with a bachelor's or master's degree in physics who have not taken the courses previously may satisfy the chemistry requirement with an "A" or "B" in two of the three courses, CHEM 301-302, CHEM 406 and CHEM 409.

Students in the chemical physics program are required to complete CHEM 510, CHEM 612, PHYS 576, PHYS 580 and PHYS 641 plus three courses from the following list: CHEM 504, 532, 550, 610, 611, 615, 616, 620;

PHYS 550, 571, 573, 661; MATH 517, 518. A minimum of four graduate courses must be in chemistry. All graduate students seeking the Ph.D. degree must complete 30 hours of CHEM 697 (research) as part of fulfilling the requirements for the degree. However, students electing the chemical physics option may substitute 15 credits of PHYS 697 for 15 credits of CHEM 697.

All other requirements are the same as those stated for the [Ph.D. in Chemistry](#).

Additional information and a more detailed description of the graduate program may be obtained from the Department of Chemistry.

## Chemistry, Master of Science (M.S.)

### Admission requirements summary

#### Chemistry, Master of Science (M.S.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.	Fall Spring	Mar 15 Nov 15	GRE

Students preparing for the Master of Science degree must demonstrate competency in analytical, inorganic, organic and physical chemistry. New students who do well on the proficiency examinations may, by decision of the chemistry faculty, be considered to have demonstrated the necessary competency. The proficiency examinations may be repeated and must be completed by the end of the second semester of study. The Master of Science student is expected to earn a minimum of 15 semester credits in six graduate courses in chemistry, not including credit for seminar, and at least 12 semester credits in research. The credit hours must include three of the following core courses (9 credits) selected from the following four areas. The total of all credits must be at least 30.

#### Analytical

CHEM 532 Advanced Analytical Chemistry

#### Inorganic

CHEM 620 Advanced Inorganic Chemistry I

#### Organic

CHEM 504 Advanced Organic Chemistry I

#### Physical

CHEM 510 Atomic and Molecular Structure

CHEM 511 Chemical Thermodynamics and Kinetics

Additional graduate courses to be taken will be determined in consultation with the faculty research adviser and the faculty of the Department of Chemistry. Graduate students may elect to take courses offered on the MCV Campus. Among the courses of interest to chemistry students taught at the MCV Campus are medicinal chemistry, stereochemistry, heterocyclic chemistry, general biochemistry, circuit design and analysis, and molecular modeling. The School of Medicine section of this bulletin should be consulted for other courses. Students are expected to participate in the department's seminar program each semester and to present at least two formal talks in the seminar program. An acceptable research thesis and a final oral examination on the thesis are required. Full-time students should complete these degree requirements in two to three years.

The Department of English offers the Master of Arts in English and the Master of Fine Arts in Creative Writing, as well as a program in media, art and text leading to a Ph.D. Visit the department's Web site at <http://www.has.vcu.edu/eng> for complete program information.

### Administration

#### Marcel Cornis-Pope

Professor and Department Chair

## Creative Writing, Master of Fine Arts (M.F.A.)

### Admission requirements summary

#### Creative Writing, Master of Fine Arts (M.F.A.)

Indicate specialization:

Fiction, Poetry or both genres

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.F.A.	Fall	Feb 1	GRE-General
Special requirements:			
Portfolio			

The Master of Fine Arts in Creative Writing is designed to attract students from diverse undergraduate backgrounds who are writers of promise. The program is suited particularly to those interested primarily in the writing of fiction and poetry; however, some emphasis also is placed on the writing of nonfiction, playwriting and screenwriting.

Graduate students in creative writing are encouraged to develop a strong personal sense of aesthetics and ethics and to pursue excellence in writing and scholarship, as well as in teaching, if they are pursuing that career option. Through the workshop experience, as well as personal conferences with the writing faculty, the program aims to help students significantly advance the quality of their writing, to enable them to become expert critics of their own and others' work, and to advise them as they seek to publish their writing.

### Admission requirements

Admission to the Master of Fine Arts Program is based most importantly on the candidate's submitted creative writing portfolio (thus students who have produced little or no creative writing prior to their application would not be eligible. The deadline for application to the Master of Fine Arts Program is Feb. 1. In addition to the general requirements for admission to graduate programs in the Graduate School and the College of Humanities and Sciences, the following requirements, established by the Creative Writing Master of Fine Arts Committee, represent the minimum acceptable standards for admission:

- A portfolio of promising fiction or poetry, possibly with drama (as a minimum, approximately eight to 10 poems, or 20 or more pages of fiction, or one act from a play, or some combination of these; in all cases, applicants should submit only their strongest creative writing samples) to be submitted to the M.F.A. program director.
- Three recommendations from persons who are qualified to give information concerning the applicant's probable success in graduate school, especially in a creative writing program.
- A scholastic record that is indicative of the applicant's ability to pursue a graduate degree successfully.
- A baccalaureate degree or its equivalent.

- Completion of the GRE (the subject test in literature is not required for M.F.A. applicants).

## Degree requirements

A total of 48 semester hours is required to complete the degree. The basic course of study required in the program includes: 12 semester hours of graduate creative writing workshops (required), 12 hours of graduate literature courses (required), and six to 12 hours of thesis work (required); the remaining 12 to 18 hours are electives, taken in literature, workshops or other graduate courses. Beyond the required courses, the student is free to work out a total program of 48 hours, with the advice of the program director or the student's thesis adviser, which is appropriate to the individual student's aims and interests. The thesis work gives students the opportunity to produce a manuscript of publishable quality. Course work also is available in the techniques of teaching creative writing, and the program is flexible enough to include studies undertaken in other departments of the university as well, including Art History, Theatre, Philosophy and the School of Mass Communications.

## English, Master of Arts (M.A.)

### Admission requirements summary

#### English, Master of Arts (M.A.)

Indicate specialization:

Literature or Writing and Rhetoric

Degree: Semester(s) Deadline Test

	of entry:	dates:	requirements:
M.A.	Summer, Fall	Mar 1	GRE-General
	Spring	Nov 15	

The Department of English offers a program leading to a Master of Arts in English with two areas of emphasis or concentration.

The program provides maximum flexibility by allowing each student, in consultation with the student's graduate committee, to select the concentration that will best develop the student's competence in those areas most relevant to scholarly and professional objectives.

Programs leading to the Master of Arts in English are:

- **Writing and rhetoric.** Designed for the candidate who is seeking intensive work in both writing and teaching expository prose or for the candidate who plans to pursue the doctor of philosophy degree.
- **Literature.** Designed for the candidate who desires intensive work in English or American literature beyond the bachelor's level or for the candidate who plans to pursue the doctor of philosophy degree.

### Admission requirements

In addition to the general requirements for admission to graduate programs in the Graduate School and the College of Humanities and Sciences, the following requirements, established by the English Graduate Studies Committee, represent the minimum acceptable standards for admission:

- a baccalaureate degree in an area appropriate to the study of literature or writing,
- a GPA that indicates the applicant can pursue successfully a graduate degree,
- three letters of recommendation from former instructors, and

- completion of the GRE. (Applicants for the literature track may, but are not required to, submit scores for the GRE subject test in literature.)

## Degree requirements

The English program consists of a minimum of 30 semester credits. After these credits have been attained, students shall be examined over their courses and research as the Graduate Committee recommends. Students also may wish to present a thesis or project, credit for which shall be determined by the Master of Arts Committee.

## Media, Art, and Text, Doctor of Philosophy (Ph.D.)

### Admission requirements summary

#### Media, Art, and Text, Doctor of Philosophy (Ph.D.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall	Mar 15	GRE-General

Special requirements:

Writing sample for all applicants. Portfolio for students wanting to take studio courses at graduate level.

This interdisciplinary Ph.D., a collaboration between the Department of English, the School of the Arts and the School of Mass Communications, is a 42-credit program of core and elective courses, seminar experiences and creative work, and a strong research component in the form of a dissertation project and defense.

The MATX Ph.D. program focuses on new media while also retaining both a historical and a theoretical dimension by encouraging the reassessment of the production, dissemination and employment of "traditional" literary texts, works of art and other kinds of texts, while in turn studying how these texts function within specific settings informed by gender, ethnicity, race and other cultural factors. The course of study in the Ph.D. also extends its reach to film and new media, television, and advertising, addressing the growing need for the study of virtual and visual texts. The program is not limited to one department or discipline within the participating units. Rather, it breaks down "disciplinary walls" in order to cultivate the research possibilities available to students, allowing them to fashion new intellectual areas for the creation and dissemination of knowledge.

### Admission requirements

The purpose of the admission requirements for the Ph.D. program in Media, Art, and Text is to assure the selection of outstanding students whose motivations, ability, education, and interests prepare them for interdisciplinary graduate study.

The following are required for admission to the program:

- A master's degree from an accredited institution in an area appropriate to the study of textual, verbal, interdisciplinary studies or visual art. Such degrees could include but not be limited to studies in the humanities, fine arts, art education, communication or advertising. Candidates must have a minimum GPA of 3.0 in post-undergraduate studies.
- A candidate who plans to work in the studio arts also will need to submit a portfolio of at least 20 slides or equivalent of past work that demonstrate their ability to do graduate-level work.
- All candidates must submit a writing sample that demonstrates the ability to write clearly, analyze effectively and perform graduate-level

seminar work.

- Satisfactory scores on the Graduate Record Exam.
- For applicants whose native language is not English, satisfactory scores from a standardized test commonly used and deemed appropriate for evaluation of English language proficiency, such as the TOEFL.
- Letters of recommendation from three present or former instructors or other individuals qualified to evaluate the applicant's ability to engage in interdisciplinary graduate study in media, art and text.
- A written personal statement describing the applicant's interest, motivation, education and goals in pursuing this degree. In this statement, the applicant needs to speak specifically to the importance of interdisciplinarity to his or her academic goals and also offer evidence of his or her suitability to pursue such a degree.

## Curriculum

The 42-hour curriculum of the Ph.D. program in Media, Art, and Text is designed to foster an intellectual, creative and artistic environment in which students from different disciplines can work collaboratively and independently to develop and disseminate knowledge in this emerging field.

## Core curriculum

The first year has 12 hours of shared course work that is required of all candidates and six hours of core electives. The courses include:

	credits
<b>First year</b>	
<b>Fall</b>	
MATX 601 Texts and Textuality	3
MATX 602 History of Media, Art, and Text	3
Elective (research methods or theory course from approved list below) within the core	3
<b>Spring</b>	
MATX 603 History of Multimedia and Interdisciplinarity	3
MATX 604 Production and Application Workshop	3
Elective (research methods or theory course from approved list below) within the core	3
<b>Approved electives in the first year</b>	
<b>Theory courses</b>	
ARTH 571 Advanced Studies in Film Theory	
ARTH 555 Advanced Studies in Aesthetics and Art Theory	
ENGL 531 Literary Theory	
ENGL 637 Theories of Rhetoric and Composition	
MASC 612 Mass Communications Theory	
MASC 613 Mass Media and Society	
PAPR 527, 528 Art and Critical Theory	
THEA 510 Theatre Historiography	
THEA 603 Dramatic Literature and Theory	
THEA 604 Modern Theatre: Theory and Practice	
<b>Research methods courses</b>	
ARTE 690 Issues and Methods of Inquiry in Art Education	
ARTH 590 Art Historiography and Methodology	
ENGL 530 Introduction to Scholarship in English Studies	

MASC 611 Research Methods in Mass Communications  
THEA 510 Theatre Historiography

## Second year

### Fall

9 hours of graduate electives 9

### Spring

9 hours of electives and study credits to prepare for spring exams and to write a project proposal. By the end of the spring semester, candidates should have completed their comprehensive exams. By the end of the spring semester, candidates should also have their project proposal completed and approved. Students will be required to take 18 hours in elective courses. In addition to MATX 690, the following 500- and 600-level seminars also may be used for elective credits. Students are advised to choose courses that directly relate to their research and creative work. Students must meet the prerequisites for these courses either through their previous course work, previously earned degrees or comparable demonstration of mastery needed for the course. 9

### Approved electives in the second year

ARTE 501-502 Concepts in Art Education  
ARTE 520 Teaching Concepts Through the Arts  
ARTE 553 Art and Perceptual Communication  
ARTE 592, 692 Independent Study in Art Education  
ARTE 600 Seminar: Issues in Art Education  
ARTE 611, 612 Literature in Art Education  
ARTE 665 Curriculum Development and Evaluation  
ARTE 670 Technology in Art Education  
ARTE 680 Teaching Laboratory  
ARTE 691 Topics in Art Education  
ARTH 555 Advanced Studies in Aesthetics and Art Theory  
ARTH 556 Advanced Studies in Ideas and Criticism in Art  
ARTH 569 Advanced Studies in Museum Methods  
ARTH 571 Advanced Studies in Film Theory  
ARTH 574 Advanced Studies in Film  
ARTH 579 Seminar in Aesthetics, Theory and Criticism of Art and Architecture  
ARTH 761 Seminar in Latin American Renaissance Art and Architecture  
ARTH 762 Seminar in Latin American 17th- and 18th-century Art and Architecture  
ARTH 789 Problems in Advanced Art and Architectural History  
ARTH 791 Topics in Early Modern Art  
CRAF 690 Graduate Seminar  
ENGL 532 Applied English Linguistics  
ENGL 553 Studies in Linguistics  
ENGL 611 The Writer in His Own Time  
ENGL 614 Major Works of Literature  
ENGL 617 Major Literary Modes  
ENGL 620 Patterns in Literary Thought  
ENGL 624 Literature in Society  
ENGL 627 Literary Genre  
ENGL 652 Studies in Writing and Rhetoric  
ENGL 661 Themes in Interdisciplinary Studies  
ENGL 670 Literary Editing and Publishing  
ENGL 672 Writing Nonfiction  
GDES 621 Visual Communications Seminar  
PAPR 690 Graduate Seminar  
PHTO 690 Seminar in Photography and Film  
MASC 605 Technology in the Classroom

MASC 611 Research Methods in Mass Communications  
 MASC 612 Mass Communications Theory  
 MASC 613 Mass Media and Society  
 MASC 620 Seminar in Mass Communications History  
 MASC 623 Ethics and Law in Mass Communications  
 MASC 624 Basic Photojournalism  
 MASC 691 Topics in Mass Communications  
 MHIS 615 Seminar in Music Theory  
 MHIS 650 Seminar in Music History  
 MUED 600 Seminar in Music Education  
 SCPT 517 Seminar in Contemporary Sculpture  
 SCPT 591 Topics in Sculpture  
 SCPT 690 Graduate Seminar  
 THEA 603 Dramatic Literature and Theory  
 THEA 604 Modern Theatre: Theory and Practice  
 THEA 623 Advanced Studies in Modern Drama  
 THEA 624 Advanced Studies in Modern Drama  
 THEA 791 Seminar in Special Issues in Theatre

## Degree requirements

Candidates for degrees are eligible for graduation upon completion of all academic requirements in effect at the time of their first registration, provided the students are continuously enrolled and provided the requirements are met within the specified time frame.

## Credit requirements

Students are required to complete 42-credit hours in core and elective courses and to conduct research or produce significant work within the participating disciplines. The core course work will be completed with courses offered through Media, Art, and Text, but the additional elective courses may draw from both seminars offered through Media, Art, and Text, and approved seminars offered in participating units.

## Grade requirements

To graduate, degree applicants must achieve an overall grade-point average of 3.0 ("B") on a 4.0 scale with a grade of "C" in no more than two courses. The GPA for graduation will be based on all graduate courses attempted after acceptance into the program.

## Admission to candidacy for Ph.D. degree

Before admission to candidacy for the Ph.D., students must have completed all required course work, successfully completed a comprehensive examination and fulfilled the requirement for demonstrated competencies.

### Requirement for demonstrated competencies

In addition to the core courses and electives selected from the curricular offerings, students must also demonstrate competencies in two areas:

1. All students must achieve competency by demonstrating mastery in computer-based media, leading to the creation and maintenance of an e-portfolio. This portfolio will be a component of the core courses in the program. When presented to demonstrate competency, the e-portfolio will be accompanied by a theoretical argument or justification.
2. Students and their dissertation committees will determine a second area of competency and the manner in which it will be fulfilled. This

second competency will be integral to the interdisciplinarity of the student's course of study. Such areas might include but not be limited to foreign language (recommended for students with art history focus), rhetoric, socio-linguistics, statistics, research methods in ethnography or other specializations, or arts administration/management.

These requirements must be met by the time of the qualifying exam (e.g., not later than the end of the third semester of the program).

### Qualifying examination

Upon completion of all required course work, student will take a written qualifying examination. Exams have two components: one that covers material from the core curriculum and a second related to the candidate's specific focus area. The exam will be written by the Graduate Studies Committee. The first portion of the exam, based on the core curriculum, will be the same for all students. The second portion will be based on a bibliography compiled by the candidate and his or her project adviser. The second portion of the exam is integral to the candidate's project proposal discussed in the section entitled "dissertation research."

## Department of Forensic Science

The Department of Forensic Science offers programs leading to bachelor's and master's degrees. The major in forensic science leads to a Bachelor of Science degree and is for students who plan a career or graduate study in the forensic sciences. This specialization features a prescribed curriculum with academic emphasis in biology, chemistry and criminal justice. The Bachelor of Science in Forensic Science degree provides students with a solid education preparing them for effective professional careers in forensic laboratories, public and private, basic research laboratories, clinical laboratories, and/or to pursue graduate studies. Students also will be prepared to pursue advanced degrees in the physical sciences, biological sciences, forensic science, law, allied health and medicine, to name a few. The Master of Science in Forensic Science program prepares students for careers as forensic scientists in government and private laboratories. Students receive in-depth exposure to specializations within the field, including drug analysis, DNA analysis, trace evidence, criminalistics and legal issues.

For more information visit <http://www.has.vcu.edu/forensics>.

### Administration

**William B. Eggleston**  
 Associate Professor and Director

## Forensic Science, Master of Science (M.S.)

### Admission requirements summary

#### Forensic Science, Master of Science (M.S.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.	Fall only	Mar 1	GRE

#### Special requirements:

Undergraduate degree in natural sciences or degree with equivalent course work; completion of two semesters or equivalent of organic chemistry with two laboratories and two semesters or equivalent of general biology with laboratories; three letters of recommendation; GPA that exceeds 2.9 on 4.0 scale; prior graduate course work and/or relevant laboratory experience will be assessed where applicable.

Most students entering the Forensic Science graduate program have a 3.0 GPA or above on undergraduate work and a combined score of 1,000 or more on the verbal and quantitative sections of the GRE.

Review of applications and offers of admission will begin January 15 and proceed until enrollment openings are filled. All application materials must be received by March 1. All applicants will be notified of a decision. There are no spring admissions in the program. The program may request a phone or in-person interview for admission. Upon acceptance of an offer of admission, a non-refundable deposit is required.

The Master of Science in Forensic Science is one of only a few of its kind in the U.S. The objective of the Master of Science in Forensic Science program is to prepare students for careers as forensic scientists in government and private forensic laboratories. In addition, students will be prepared to pursue further graduate and/or professional academic degrees.

Core courses in the forensic science curriculum offer broad exposure to forensic laboratory equipment and instrumentation, as well as, legal issues, expert testimony, forensic biology, forensic chemistry, trace evidence, physical evidence, professional ethics, quality assurance, and current topics in research and development within the forensic sciences. Students entering the program will be required to select a concentration track by the end of their first semester. Tracks offered include forensic biology, forensic chemistry/drugs and toxicology, forensic chemistry/trace, and the forensic physical track. A strong emphasis is placed on laboratory course work, providing students with significant laboratory experience. Several of the laboratory courses are taught by practicing professional forensic scientists at the Virginia Division of Forensic Science Central Laboratory, which is nationally accredited by the American Society of Crime Laboratory Directors.

The Master of Science in Forensic Science degree requires 36 semester hours of course work including 24 semester hours of required core course work and 12 semester hours of specialized course work designed for each track. The graduate program is a full-time, two year program. Courses taken will vary depending on the track selected. Required and elective courses are offered at various times, day and night, throughout the week.

## Admission requirements

Beyond the general Graduate School standards listed in the Graduate Studies at VCU section in this bulletin, admissions will be based on:

- bachelor's degree in a natural science discipline, including forensic science, or a degree with equivalent work.
- an undergraduate GPA that exceeds 2.9 on a 4.0 scale.
- a completion of eight credits (two semesters or equivalent) of organic chemistry with laboratories and eight credits (two semesters or equivalent) of general biology with laboratories.
- assessment of prior graduate course work and/or relevant laboratory experience (where applicable).
- three letters of recommendation pertaining specifically to the student's potential ability as a graduate student in forensic science.

Most students entering the forensic science graduate program have a 3.0 GPA or above on undergraduate work and a combined score of 1,000 or more on the verbal and quantitative sections of the GRE.

Review of applications and offers of admission will begin Jan. 15 and proceed until enrollment openings are filled. All application materials must be received by March 1. All applicants will be notified of a decision. There are no spring admissions in the program. The program may request a

phone or in-person interview for admission. Upon acceptance of an offer of admission, a nonrefundable deposit is required.

## Degree requirements

The following requirements are in addition to those described for graduate programs in the School of Graduate Studies and the College of Humanities and Sciences.

- Students must complete a minimum of 36 graduate semester credits as outlined in the accompanying list of core and track requirements, including electives.
- Maintenance of an ongoing, cumulative GPA of 3.0 or above is required while enrolled.
- Courses below the 500 level will not count toward degree requirements.
- Receipt of a grade of "C" in two or more courses will constitute an automatic dismissal from the graduate program in forensic science.
- Receipt of a grade of "D" or lower in any one course will constitute an automatic dismissal from the graduate program in forensic science.
- Continuous, full-time enrollment in the graduate program is required. Interruption in continuous enrollment or full-time status for any reason without a leave of absence approved by the Forensic Science Graduate Committee will require that students reapply to the program.
- Request for credit for graduate course work taken at other institutions must be submitted to the director of graduate studies in Forensic Science and will be considered on a case-by-case basis by the Forensic Graduate Committee.
- If course work deficiencies are identified, students may be required to take additional foundational courses beyond those listed below.

### Core requirements

(24 credits)	credits
FRSC 570 Forensic Science Seminar*+ (1 credit each)	3
FRSC 661 Analysis of Pattern Evidence (lecture/laboratory) or FRSC 662 Firearm and Toolmark Identification (lecture/laboratory)	3
FRSC 670 Forensic Evidence and Criminal Procedure	3
FRSC 671 Instrumentation in Forensic Chemistry*	3
FRSC 673 Forensic Microscopy*	2
FRSZ 673L Forensic Microscopy Laboratory*	1
FRSC 675 Forensic Serology and DNA Analysis*	2
FRSZ 675L Forensic Serology and DNA Analysis Laboratory*	1
FRSC 677 Expert Testimony in Forensic Science	3
FRSC 793 Forensic Laboratory Internship	3

### Tracks

(12 credits – choose one track)

#### Forensic biology



FRSC 676 Advanced Forensic DNA Analysis (lecture/laboratory)	3
BIOL 516 Population Genetics or STAT/BIOS/EPID 3	
543 Statistical Methods I	
Electives	6

**Forensic chemistry/drugs and toxicology**

FRSC 672 Advanced Drug Analysis (lecture/laboratory)	3
PHTX 644 Forensic Toxicology	3
Electives	6

**Forensic chemistry/trace**

FRSC 681 Analysis of Fire Debris & Explosives (lecture/laboratory)	3
FRSC 682 Forensic Analysis of Paints & Polymers (lectures/laboratory)	3
Electives	6

**Forensic physical evidence**

FRSC 661 Analysis of Pattern Evidence (lecture/laboratory) or FRSC 662 Firearm and Toolmark Identification (lecture/laboratory)	3
FRSC 665 Scientific Crime Scene Investigation (lecture/laboratory)	3
Electives	6

**Electives**

FRSC 591 Special Topics: Forensic Medicine	3
FRSC 591 Special Topics: Computer Fraud and Computer Crimes	3
FRSC 661 Analysis of Pattern Evidence (lecture/laboratory)	3
FRSC 662 Firearms and Toolmark Identification (lecture/laboratory)	3
FRSC 665 Scientific Crime Scene Investigation (lecture/laboratory)	3
FRSC 672 Advanced Drug Analysis (lecture/laboratory)	3
FRSC 676 Advanced Forensic DNA Analysis (lecture/laboratory)	3
FRSC 680/CRJS 680 Forensic Psychiatry	3
FRSC 681 Analysis of Fire Debris and Explosives (lecture/laboratory)	3
FRSC 682 Forensic Analysis of Paints and Polymers (lecture/laboratory)	3
FRSC 692 Forensic Science Independent Study	3
BIOC 503 Biochemistry, Cell and Molecular Biology 3 I	
BIOC 504 Biochemistry, Cell and Molecular Biology 3 II	
BIOL 530/HGEN 501 Human Genetics	3
BIOL 540 Molecular Genetics	3
BIOL 693 Current Topics: Molecular Biology	1
CRJS 591 Special Topics: Drugs and Crime	3
PHTX 535 Introduction to Toxicology	3
PHTX 644 Forensic Toxicology	3
Other electives may be permitted with permission of adviser.	

*	Courses required the <b>first fall</b> semester upon entry into the Forensic Science Program.
+	This course is one credit; three credits total must be taken; one credit must be completed in each semester of the first full year of enrollment.

**Financial information**

Information and application forms for financial aid information may be secured from the VCU Office of Financial Aid, 901 W. Franklin St., Room 107, Richmond, VA 23284-3026, (804) 828-6669.

**Correspondence and information**

General program information can be obtained by accessing the program's Web site at [www.has.vcu.edu/forensics](http://www.has.vcu.edu/forensics). Application forms and instructions for applying to all graduate programs are available on the Graduate School Web site at [www.vcu.edu/graduate](http://www.vcu.edu/graduate).

**Department of History**

The Department of History offers programs at the graduate and undergraduate levels, specializing in a multidimensional analysis of the human past. Faculty research interests vary among thematic, topical, national or chronological emphases. For more information regarding the department and its specialty areas, visit the Web at <http://www.has.vcu.edu/his>.

**Administration**

**Joseph W. Bendersky**  
Professor and Department Chair

**History, Master of Arts (M.A.)****Admission requirements summary****History, Master of Arts (M.A.)**

Degree:	Semester(s)	Deadline	Test
	of entry:	dates:	requirements:
M.A.	Fall	Jul 1	GRE
	Spring	Dec 1	
	Summer	Apr 1	

The Master of Arts in History program allows maximum flexibility by permitting each student, in consultation with the department's director of graduate studies, to select those courses most appropriate to their interests, in order to develop competence in pursuit of his or her scholarly and professional objectives.

**Admission requirements**

In addition to the general requirements for admission to graduate programs in the Graduate School and the College of Humanities and Sciences, the following requirements, established by the History Graduate Affairs Committee, represent the minimum acceptable standards for admission:

- 30 hours of undergraduate history courses, of which 18 should be at the upper-division level
- a GPA that is indicative of the applicant's ability to successfully pursue a graduate degree
- three recommendations from persons who are qualified to give information concerning the applicant's probable success in graduate school
- completion of the GRE
- submission of a 500-word written statement of intent, indicating why the applicant wishes to pursue a graduate degree in history

A personal interview is not required, but may be requested by either the applicant or the department's Graduate Affairs Committee.

## Degree requirements

The Master of Arts in History may be achieved through one of two options. The thesis option requires 30 semester credits, including six credits of HIST 698; or the non-thesis option requires 36 semester credits. Those in the non-thesis track must take a minimum of six semester credits in research-level courses, and also an oral comprehensive exam. All students in both tracks must take HIST 601 as a prerequisite or corequisite for all research courses; students entering in January should take HIST 601 the next time it is offered.

### Elective courses

Students may take up to six semester credits of non-history electives from an approved list. The department's Graduate Affairs Committee maintains the list of approved courses, and students may use these courses for credit with the approval of the graduate director. In addition, students who wish to pursue specific areas of study may, with the approval of the graduate director, substitute other courses when appropriate, but in no case shall be able to count more than six semester hours of non-history courses.

## Department of Mathematics and Applied Mathematics

The Department of Mathematics and Applied Mathematics offers programs leading to a Bachelor of Science in Mathematical Sciences and a Master of Science in Mathematical Sciences with a concentration in either applied mathematics or mathematics. The curriculum of both programs is run jointly with the [Department of Statistical Sciences and Operations Research](#).

The department also offers a postbaccalaureate undergraduate certificate in mathematical sciences. Students seeking more information or wishing to enter the certificate program should contact the Department of Mathematics and Applied Mathematics.

### Administration

**Andrew M. Lewis**

Associate Professor and Department Chair

## Mathematical Sciences, Master of Science (M.S.)

### Admission requirements summary

#### Mathematical Sciences, Master of Science (M.S.)

Indicate specialization:

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.	Fall	Apr 1 Priority deadline for funding consideration Nov 1	GRE-General

Spring

**Special requirements:**

Contact director of graduate studies for specific admission requirements

A Master of Science in Mathematical Sciences is offered jointly by the Department of Mathematics and Applied Mathematics and the Department of Statistical Sciences and Operations Research. The Master of Science in Mathematical Sciences offers specializations in several possible areas,

including applied mathematics, mathematics, operations research, statistics, discrete structures and others.

## Admission requirements

In addition to the general requirements for admission to graduate programs listed in the [Graduate Studies at VCU](#) section and the [College of Humanities and Sciences](#) section of this bulletin, the following requirements represent the minimum acceptable standards for admission:

- Thirty credits in undergraduate mathematical sciences, computer science or related areas of which at least 18 semester credits must represent upper-level courses.
- Three letters of recommendation pertaining to the student's potential ability as a graduate student in mathematical sciences.
- General GRE scores required.

Provisional admission may be granted when deficiencies exist. These deficiencies must be removed by the end of the first year of residence, or its part-time equivalent, when the student's application will be re-examined. Courses that are remedial or designed to remove deficiencies will not be accepted for credit toward the fulfillment of the course requirements for the master's degree.

## Degree requirements

The program offers maximum flexibility by allowing students, in consultation with their graduate committees, to design a course of study that will best develop competence in those areas most relevant to their scholarly and professional objectives. This program consists of a minimum of 30 semester credits of which at least 15 must be at the 600 level.

Students may obtain a designation on their transcripts indicating that their graduate study has emphasized one of the following graduate concentrations by completing the requirements that are listed here for that concentration. A student who has not satisfied the requirements for one of these concentrations, but who has otherwise fulfilled all the requirements for a master's degree, will be awarded a degree of Master of Science in Mathematical Sciences without any specialization.

- applied mathematics
- mathematics
- operations research
- statistics

Note that the following courses cannot be applied to the credit requirements for the M.S. in Mathematical Sciences: STAT/SOCY 508, STAT/BIOS/EPID 543 and STAT/SOCY 608.

## Curricula

### Mathematics and applied mathematics concentrations

Each student will select either the thesis or non-thesis option. If a student chooses the non-thesis option, they must complete a directed research project and a comprehensive examination. If a student elects to write a thesis, the student's adviser determines the number of credits completed in MATH 698.

### Non-thesis option

Mathematical sciences (including both 21 semesters of a 600-level sequence)



Mathematical sciences or allied field*	6-9
Research Seminar credits**	2-5
Directed research credits**	0-3
	<hr/>
	30

**Thesis option**

Mathematical sciences (including both semesters of a 600-level sequence)	18
Mathematical sciences or allied field*	6-9
Thesis credits	3 or 6
Research seminar credits**	1-3
Directed research credits**	0-3
	<hr/>
	30

\* Courses selected from an allied field must be approved by the department's Graduate Affairs Committee.

\*\* The student who chooses the non-thesis option may receive a maximum total of four credits for MATH 690 Research Seminar and MATH 697 Directed Research. The student who chooses the thesis option usually will not take directed research, but he or she is not prohibited from doing so. In the thesis option, a total of seven credits for thesis, research seminar and directed research is the maximum credit permitted.

**Statistics and operations research concentrations**

Each student will complete either a thesis or an applied project. A student who chooses the thesis option has a choice of writing a research thesis or an expository thesis. A research thesis is one that, in the opinion of the student's thesis adviser and thesis committee, contains significant original research. For this thesis, the student may count six credits of STAT 698 or OPER 698. Otherwise, a student may write an expository thesis. For this type of thesis, the student may count three credits of STAT 698 or OPER 698.

The student who elects the applied project must prepare a written report of the project and make an oral presentation; these students may count three credits of STAT 696 or OPER 696. Students cannot receive credit for both STAT/OPER 696 and STAT/OPER 698.

Mathematical sciences (including both semesters of a 600-level sequence)	18
Mathematical sciences or allied field*	6-9
Thesis or applied project credits	3 or 6
Directed research credits**	0-3
	<hr/>
	30

\* Courses selected from an allied field must be approved by the department's Graduate Affairs Committee.

\*\* A student can receive a maximum of six credits in thesis/applied project and directed research. Hence a student who writes a six-credit thesis cannot receive any directed research credits. A student who completes a three-credit thesis or the applied project, however, may receive up to three directed research credits.

**Applied mathematics concentration****Master of Science in Mathematical Sciences with a concentration in applied mathematics**

MATH 517, 518\*; a six-credit sequence selected from MATH 617-618, 619, 620, 621 and at least six credits selected from MATH 511, 512, 515, 516, 615, 689, STAT 513-514. Also, at least one seminar and the thesis (if chosen) must concern topics of applied mathematics.

\* If a student previously received credit for one or both of these courses or their equivalent, then one or two of the other courses mentioned for this concentration must be taken as substitute(s) to satisfy the minimum requirement of 15 credits of course work in the concentration.

**Mathematics concentration****Master of Science in Mathematical Sciences with a concentration in mathematics**

MATH 507, 508\*; a six-credit sequence selected from 601-602, 603-604, 607-608, 611-612, and at least three credits from MATH 505, 509, 510, 521, 525 or any otherwise uncounted 600-level course for this concentration. Also, at least one seminar and the thesis (if chosen) must concern topics of pure mathematics.

\* If a student previously received credit for one or both of these courses or their equivalent, then one or two of the other courses mentioned for this concentration must be taken as substitute(s) to satisfy the minimum requirement of 15 credits of course work in the concentration.

**Operations research concentration****Master of Science in Mathematical Sciences with a concentration in operations research**

OPER 527-528; STAT 541; OPER 690; OPER 696 or 698; and at least six additional credits selected from OPER 631, 635, 641, 643, 645, 647, 648, 649, and approved 691\*. The applied project or thesis must concern topics of operations research.

\* Use of OPER 691 to meet this requirement must be approved by the Department of Statistical Sciences and Operations Research and the Graduate Affairs Committee of the department at the time the course is scheduled.

**Statistics concentration****Master of Science in Mathematical Sciences with a concentration in statistics**

STAT 513-514\*; STAT 690; STAT 696 or 698; and at least nine additional credits selected from STAT 623, 642, 643, 644, 645, 648, 649 and approved 691\*\*. The applied project or thesis must concern topics of statistics.

\* If a student previously received credit for one or both of these courses or their equivalent, then one or two of the other courses mentioned for this concentration must be taken as substitute(s) to satisfy the minimum requirement of 15 credits of course work in the concentration.

\*\* Use of STAT 691 to meet this requirement must be approved by the Department of Statistical Sciences and Operations Research and the Graduate Affairs Committee of the department at the time the course is scheduled.

**Department of Physics**

The Department of Physics offers programs leading to the Master of Science in Physics and the Ph.D. in Medical Physics. The department also offers an accelerated B.S.-M.S. program that allows students in the Bachelor of Science program to take graduate courses that will count

toward the Master of Science in Physics degree.

## Administration

### Robert H. Gowdy

Associate Professor and Department Chair

## Medical Physics, Doctor of Philosophy (Ph.D.)

### Admission requirements summary

#### Medical Physics, Doctor of Philosophy (Ph.D.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall	Mar 1	GRE

The Ph.D. in Medical Physics offers students course work and research training in physics as it is applied to the diagnosis and treatment of human diseases. Research interests include functional imaging using PET and NMR, CT image artifact removal and deformation, intensity-modulated radiation therapy, radiation therapy dose calculations, 4D radiation therapy, and brachytherapy dose calculations.

### Admission requirements

In addition to the general requirements for admission to graduate programs in the Graduate School and the College of Humanities and Sciences, students are expected to satisfy the following minimum standards for admission:

- Students must have a minimum of 30 semester credits in undergraduate physics, physical science or engineering, of which at least 18 credits must be at the upper level.
- Satisfactory GRE scores.
- Provisional admission may be granted where deficiencies exist. These deficiencies must be removed by the end of the first year of residence or its part-time equivalent, when the student's application will be re-examined. Courses that are designed to remove deficiencies will not be accepted for credit toward the graduate degree.

### Degree requirements

Students entering the program with an undergraduate degree are required to earn a minimum of 30 credits in didactic or laboratory course work. Students entering with a master's degree in medical physics, physics or an appropriate related field, are required to earn a minimum of 18 course credits. In addition to course work, the Ph.D. requires a minimum of 12 credits in PHYS 697 (directed research). At least half of the course work must be earned at the 600 level or higher. Detailed degree requirements are listed in the Medical Physics graduate handbook.

All new students entering the program initially will be advised by the Medical Physics Graduate Advisory Committee, until they have selected a research adviser and formed a graduate dissertation committee. Each student should select a research adviser and area of research before the end of his/her third semester. A graduate dissertation committee will direct the student in his/her research and subsequent course selection, will report annually to the program director on the academic progress of the student and will administer the oral candidacy and dissertation defense examinations.

The student is required to complete written and oral examinations to be admitted as a Ph.D. candidate. The comprehensive written examination covers core knowledge and applications in medical physics course work, as well as basic concepts in physics, chemistry and biology. The oral examination, administered by the student's graduate dissertation committee, is based upon a written prospectus describing the proposed dissertation research project. Examiners evaluate the adequacy of the proposed project, the student's level of understanding of the project and the likelihood that the dissertation can be completed successfully.

After becoming a Ph.D. candidate, the student must conduct a substantial original investigation under the supervision of his/her adviser and must prepare a dissertation reporting the results of the research in the context of existing scientific knowledge. After the dissertation has been completed and unanimously accepted for defense by the student's graduate dissertation committee, the candidate will appear before the committee for an oral defense. The oral dissertation defense examines the candidate's research, dissertation documentation, and underlying fundamental knowledge. Upon successful completion of the defense and dissertation, the student may apply for graduation with a Ph.D. in Medical Physics.

## Physics, Master of Science (M.S.)

### Admission requirements summary

#### Physics, Master of Science (M.S.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.	Fall Spring	Aug 1 Dec 1	GRE

The Master of Science program offers traditional core physics courses and a variety of specialized electives emphasizing the department's strengths in theoretical and experimental physics. Research interests include theoretical and experimental condensed matter physics, general relativity and cosmology, and physics education. This degree is designed to be completed in two years (four semesters).

### Admission requirements

In addition to the general requirements for admission to graduate programs in the Graduate School and the College of Humanities and Sciences, students are expected to satisfy the following minimum standards for admission:

- Students must have a minimum of 30 semester credits in undergraduate physics or engineering, of which at least 18 semester credits must be at the upper level in physics.
- Satisfactory GRE scores.
- Provisional admission may be granted where deficiencies exist. These deficiencies must be removed by the end of the first year of residence or its part-time equivalent, when the student's application will be re-examined. Courses that are designed to remove deficiencies will not be accepted for credit toward the graduate degree.

### Degree requirements

Each student is required to take 30 semester credits of approved graduate courses (see M.S. plan of study) with at least 15 semester credits at the 600 level. PHYS 690 and PHYS 697 may not exceed 15 of the required 30 credit hours.

**M.S. plan of study**

Each student will choose a primary adviser during the first semester of study. At the end of the first semester, the student and adviser will propose an M.S. plan of study to the Graduate Curriculum Committee. This plan will include the graduate courses and research subject matter to fulfill the student's individual career goals.

Normally, each student will select courses for their individual M.S. plan of study from the list of graduate courses in physics. The courses selected will include no fewer than nine credits of traditional physics core courses, such as PHYS 576 and PHYS 580, to provide a solid foundation in fundamental physics. However, students also may select graduate courses in chemistry, mathematics, computer science and engineering, as well as from the schools of Medicine and Education, when such courses are consistent with the student's career goals.

The M.S. plan of study must be approved by the Physics Graduate Curriculum Committee. Courses taken outside this plan will not count toward the above general course requirements.

**Thesis or non-thesis option**

Each student must select either the thesis option or non-thesis option. Students selecting the thesis option must take at least nine credit hours of PHYS 697 Directed Research. No more than nine semester credits of Directed Research may be counted toward the 15 credit 600-level requirement.

Students selecting the non-thesis option may take no more than three hours of PHYS 697. A student who elects the non-thesis option must pass a written comprehensive exam. This exam will be administered by the Physics Graduate Curriculum Committee.

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**Accelerated Bachelor of Science (B.S.) and Master of Science (M.S.) in Physics**


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Students who are enrolled in the Bachelor of Science in Physics program may elect to take graduate courses that will count toward the Master of Science in Physics degree. Up to six hours of graduate credit may be earned in this way without any special provision. In order to offer more than six hours of pre-admission graduate credit toward the graduate degree, a student must apply to the physics department Graduate Admission Committee for admission to the Accelerated B.S.-M.S. program. Persons applying for admission to this program (1) should submit a curricular plan for completing the bachelor's degree within two years or its part-time equivalent; (2) should indicate which graduate courses they intend to offer toward the physics master's degree; (3) should have a "B" average or better.

The M.S. Degree Completion Form should be accompanied by a memo from the Department of Physics Graduate Admission Committee to indicate which graduate courses were taken under the Accelerated B.S.-M.S. Program.

## Department of Psychology

The Department of Psychology offers instruction in clinical, counseling and general psychology leading to the Doctor of Philosophy degree. Students in all three programs are educated first as psychologists and then helped to develop competence in a more specialized area relevant to their scholarly and professional objectives. In addition, special training and experience in college teaching is available.

**Administration**

**Everett L. Worthington**

Professor and Department Chair

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**Psychology, Doctor of Philosophy (Ph.D.)**


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**Admission requirements summary****Psychology, Doctor of Philosophy (Ph.D.)**

Indicate specialization:

The doctoral programs in clinical and counseling psychology are accredited by the American Psychological Association. The programs emphasize the scientist-practitioner model and prepare students for research and service in professional psychology, including positions in university academic and medical school departments, counseling centers, mental health agencies and hospitals, physical health facilities, and other organizational settings.

The clinical psychology program offers tracks in adult, child and behavioral health psychology. The counseling psychology program emphasizes the enhancement of life skills and personal competence. Typical subspecializations include disease prevention and health promotion, career and life planning, work with medical populations, college students, community outreach, interpersonal processes, group counseling, marriage and family counseling, multiculturalism and sport psychology.

The program in general psychology prepares students for basic or applied research and includes three divisions: biopsychology, developmental and social psychology. The program in developmental trains students for work in either college/university academic departments or applied settings. Applied developmentalists work in a variety of settings and programs (violence prevention, community intervention, schools, family service agencies, nonprofit agencies, health care settings, disability agencies) with a variety of human populations (infants and young children, school-age children, adolescents, at-risk youth, incarcerated youth and adults, parents, older adults, persons with disabilities); they do not offer counseling/therapy services.

The Center for Psychological Services and Development, a campus-based community service agency operated by the department, provides training opportunities for graduate students in all departmental programs, including practicum and research training for graduate students in the clinical and counseling psychology programs. A wide variety of other on- and off-campus practicum placements also are available.

The department maintains laboratory facilities for research in the areas of behavioral assessment, behavioral medicine, developmental, learning, behavioral pharmacology, psychophysiology, psychotherapy process, social perception, social influence and group dynamics. Opportunities for field research also are available in a variety of settings. A collection of current journals and books in psychology is housed in the James Branch Cabell Library on the Monroe Park Campus and in the Tompkins-McCaw Library on the MCV Campus.

Teaching assistantships, research assistantships and paid practicum placements are available.

**Admission requirements**

In addition to the general requirements for admission to the graduate programs in the Graduate School (in the [Graduate Studies at VCU](#) section of this bulletin), the following requirements represent the minimum

acceptable standards for admission:

- graduation with a bachelor's degree from an accredited college or university, but not necessarily with a major in psychology
- 18 semester hours of undergraduate course work in psychology is the minimal, but not optimal, number of hours for an applicant to be considered for admission. Included must be each of the following courses: general psychology, statistics and experimental psychology. Exceptionally well-qualified applicants with less than a major in psychology, or applicants whose undergraduate work is considered outdated by the admissions committee, may be advised to complete some additional undergraduate courses at the beginning of their graduate study program.
- an undergraduate record indicating superior academic potential
- satisfactory performance on the GRE
- three letters of recommendation from previous instructors
- a personal interview may be required at the discretion of the department

The number of students who can be admitted is limited by the facilities and staff available. All applicants will be notified of the decision made. The screening process may begin as early as Jan. 1. First offers of admission are made by April 1. By June 1, after other offers to alternates have been made and final acceptances by students have been received, admissions may be closed. The application deadline is Dec. 1 (preferred) and Dec. 10 (required) for the clinical and counseling programs, and Jan. 15 for developmental, social and biopsychology.

Applicants to the general psychology program should specify to which of the three divisions they are applying (i.e., biopsychology, developmental or social).

Transfer credits for graduate work at other institutions will be evaluated after the completion of nine semester hours in the department.

## Degree requirements

The following requirements are in addition to those described for the graduate programs in the Graduate School (the [Graduate Studies at VCU](#) section of this bulletin) and College of Humanities and Sciences (beginning of the [College of Humanities and Sciences](#) section of this bulletin).

All students are required to complete a core curriculum of 15 credits (or its equivalent for students entering with a master's degree).

Students who receive grades of "B" or better in each of the department core courses are considered to have fulfilled the university requirements of a master's level comprehensive examination and will then officially be considered candidates for the Master of Science degree. Students who receive grades of "C" or lower in two or more department core courses will have failed the comprehensive examination and will be dismissed automatically from the program. Students who receive a grade of "C" or lower in one of the department core courses must either (a) satisfactorily complete a re-examination of the material covered in the course within one semester following the receipt of the grade (this re-examination is to be arranged and evaluated by the course instructor), or (b) repeat the course for credit the next time it is offered and receive a grade of "B" or better. Regardless of which of these approaches is chosen, the students will be given only one opportunity to demonstrate that they have mastered the course material. Students who either fail the re-examination or repeat the course and receive a grade of "C" or lower will have failed the comprehensive examination and will be dismissed from the program.

Additional courses and training experiences will be determined in consultation with and subject to the approval of the student's faculty adviser and graduate program committee.

Receipt of a grade of "C" or lower in two courses, or grades of "C" or lower in more than six credits of psychology courses, constitutes automatic dismissal of a student from the program.

All students are required to complete a master's thesis and to defend it successfully in an oral examination. Ideally, the thesis should be publishable as a piece of research and make a contribution to the field of psychology. Students who have previously completed a master's thesis in psychology at another university may have the thesis requirement waived if the thesis is accepted by their graduate program committee.

The residence requirement for the master's degree is 18 hours, nine in each of two consecutive semesters. Completion of the degree usually requires four semesters. At least six semester credits in PSYC 798 Master's Thesis must be completed, and no more than six can be counted toward the M.S. degree.

Students are obligated to request, in writing from their program committees, continuation of study beyond the master's degree and approval of their doctoral plan of study. Application from a student for continuation beyond the master's level will be evaluated by the appropriate program committee after completion of all requirements for the master's degree. The program committee reviews the student's request and approves or disapproves the request.

The student must pass a written preliminary examination to become a doctoral candidate. Students are required to complete this requirement prior to defense of their dissertations and prior to leaving on internship for students in the clinical and counseling psychology programs.

With the consent of the program committee, doctoral students may design a minor consisting of courses in departments other than psychology or courses in an area of psychology other than the major.

Both the clinical and counseling psychology programs require completion of applied practica and a one-year predoctoral internship approved by the program committee. Research practica are required by all programs. Practicum credit will vary depending on the program. Internship will be one-half credit per semester.

A dissertation requiring the planning, completion and oral defense of an original research project is an integral part of the doctoral program. At least 12 semester credits in PSYC 898 Doctoral Dissertation must be completed, and no more than 12 can be counted toward the Ph.D. degree.

Completion of the entire program usually requires four to six years (including the internship year for students in the clinical and counseling programs). Candidates must complete all requirements for the Ph.D. degree within a seven-year period from the date of admission to the graduate program unless permission is granted for an extension. In some cases, specific programs and divisions may have requirements in addition to those stated here.

A more detailed description of the requirements for each of the graduate programs is included in the Department of Psychology's Graduate Student Handbook, which is provided to each incoming graduate student. Visit the Web site for more information: <http://www.has.vcu.edu/psy>.

## Curriculum requirements

### Department core

PSYC 619 Learning and Cognition  
 PSYC 620 Design and Analysis of Psychological Research  
 PSYC 621 Statistics in Psychological Research  
 PSYC 617 Sensation and Perception or PSYC 629 Biological Basis of Behavior

Ethics: choose one of the following:

- PSYC 675 Ethical Principles of Psychology (two credits) or
- GRTY 606 Aging and Human Values (three credits) or
- MICR 510 Scientific Integrity (one credit)

## Clinical psychology

### Admission requirements summary

#### Clinical psychology

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D., Psychology	Fall only	Dec 10 (new deadline; Dec 1 to receive full consideration for fellowship)	GRE-General

#### Special requirements:

Applicants for any of the three programs should apply to the Ph.D. program only. Psychology does not offer a terminal master's degree.

Personal interview may be required for the clinical program.

Successful completion of clinical psychology program core courses (PSYC 616, 627, 643, 644, 645 or 649, 650, 652 or 667).  
 Successful completion of 22 credit hours of clinical practicum (PSYC 694) and one credit hour of research practicum (PSYC 690). Up to six credit hours may be waived depending on experience and ability.  
 Successful completion of one three-credit assessment elective (e.g., PSYC 626, 641, 645, 646, 647, 648, 649).  
 Successful completion of one three-credit therapy/intervention elective (e.g., PSYC 623, 624, 652, 653, 654, 656, 660, 666, 667, 668, 669, 670).  
 Students need to meet a social aspects of behavior breadth requirement by successfully completing PSYC 630, PSYC 633 or another graduate course in social aspects of behavior approved by the clinical faculty.  
 Students need to meet a cultural/individual diversity breadth requirement by successfully passing PSYC 677 or another graduate course in cultural/individual diversity approved by the clinical faculty.  
 Successful completion of three one-half credit consecutive semesters of an approved predoctoral internship, PSYC 696.  
 A minimum of 87.5 semester hours of approved courses beyond the baccalaureate degree.  
 Students should, if planning to practice clinical psychology, attend to the current licensure requirements of the state in which they plan to practice.

## Counseling psychology

### Admission requirements summary

#### Counseling psychology

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D., Psychology	Fall only	Dec 1 (new deadline)	GRE-General

#### Special requirements:

Please submit a curriculum vitae or resume.

Applicants for any of the three programs should apply to the Ph.D. program only. Psychology does not offer a terminal master's degree.

Personal interview may be required for the counseling program.

Counseling psychology program core curriculum successfully completed (PSYC 608, 611, 616, 623, 625, 643, 644, 645, 651, 655, 660/or approved health psychology elective, 676, and 695).

Successful completion of 12 credit hours of counseling practicum (PSYC 693) and three credit hours of research practicum (PSYC 690).

Successful completion of other required courses, including PSYC 603 or 633 or other approved developmental course.

Students need to meet a social aspects of behavior breadth requirement by successfully completing PSYC 630 or another graduate course in social aspects of behavior approved by the counseling faculty.

Successful completion of three one-half credit consecutive semesters of an approved predoctoral internship (PSYC 696).

A minimum of 88 credit hours of approved courses beyond the baccalaureate degree. The current recommended curriculum totals 97.5 credit hours.

## General psychology

### Admission requirements summary

#### General psychology

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D., Psychology			GRE-General

Developmental psychology, biopsychology, social psychology

#### Special requirements:

Applicants for any of the three programs should apply to the Ph.D. program only. Psychology does not offer a terminal master's degree. Please indicate your interest in biopsychology, developmental psychology or social psychology in your application.

Personal interview may be required.

General psychology program doctoral courses completed (PSYC 638; three hours of 671 and/or 690; and 602 or 603 or 605).

Successful completion of one of the following specialized division curricula:

#### Biopsychology division curriculum

PSYC 629, PSYC 617, PSYC 639 and three courses from the following list: PSYC 612, PSYC 622, PHTX 632, PHIS 501, PHTX 633 and approved special topics courses (PSYC 691).

#### Developmental division curriculum

PSYC 603, PSYC 636, and PSYC 671 or PSYC 690

- Three or more "age-stage" courses chosen from: PSYC 691 Infant Behavior and Development, PSYC 691 Early and Middle Childhood, PSYC 628 Psychology of Adolescent Development and PSYC 602 Psychology of Aging.
- One course in diversity (most often PSYC 677 Minority Mental Health).
- Two applied courses chosen from PSYC 691 Program evaluation, PSYC 700 Grant-writing, PSYC 795 Teaching of Psychology, PSYC/GRTY 642 Practicum in Clinical Geropsychology, PSYC/IDDS 600 Interdisciplinary Studies in Developmental Disabilities: Teamwork, PSYC/IDDS 692 Directed Studies in Developmental Disabilities, IDDS 691 Special Topics or other courses approved by adviser.

- Students will take one or more courses in psychopathology or disabilities, choosing from PSYC/GRTY 615 Aging and Mental Disorders, PSYC 616 Psychopathology, PSYC 650 Advanced Child Psychopathology, PSYC/IDDS 600 Interdisciplinary studies in Developmental Disabilities: Teamwork, PSYC/IDDS 692 Directed Studies in Developmental Disabilities, IDDS 691 Special Topics or other relevant classes as approved by adviser.
- Additional training in methodology or statistics: one or more courses selected from NURS 772 Advanced Qualitative Research, MGMT 643 Applied Multivariate Methods, MGMT/PSYC 702 Causal Analysis for Organizational Studies, SOC 605 Survey Research Methods, HADM 762 Health Services Research Methods II, BIOS 544 or other relevant courses as approved by adviser.
- One graduate course in social psychology is required.

Students specializing in life span development and gerontology must take the following set of gerontology courses in addition to other developmental and core requirements — these courses will result in a Certificate in Aging from the Department of Gerontology:

GRTY 601 Biological and Physiological Aging  
 GRTY 602 Psychology of Aging  
 GRTY 605 Social Gerontology  
 GRTY 692 Independent Study (two credits)  
 Six additional hours of gerontology electives, chosen with adviser

#### Electives

Students, working with faculty, should choose additional courses as needed for their career goals; the number of electives taken is optional, and other courses not on this list may qualify, provided students work in consultation with faculty advisers:

GRTY 601 Biological and Physiological Aging  
 GRTY 602 Psychology of Aging  
 GRTY 605 Social Gerontology  
 HGEN 620 Introduction to Principles of Human Behavioral Genetics  
 PSYC 613 Cognitive Development  
 PSYC/GRTY 635 Psychology of Health and Health Care in the Elderly  
 PSYC 638 Evolution of Psychological Systems  
 PSYC 644 Individual Tests of Intelligence  
 PSYC 645 Clinical Assessment of Child Disorders  
 PSYC/GRTY 641 Survey of Psychological Assessment and Treatment of the Older Adult  
 PSYC 655 Community Interventions: Development, Implementation and Evaluation  
 PSYC 659 Seminar in Consultation Psychology  
 PSYC 660 Health Psychology  
 PSYC 691 Parenting or other special topics courses as available

#### Social division curriculum

PSYC 630, PSYC 632 and three courses from the following list: PSYC 604, PSYC 610, PSYC 633 and PSYC 634.

- A minimum of 72 semester hours of approved courses beyond the baccalaureate degree

## Psychology, Master of Science (M.S.)

The Department of Psychology does not offer a terminal master's degree. Please refer to the information provided under the [Ph.D. listings](#) for

Clinical, Counseling or General Psychology.

## Department of Sociology

The goal of the master's program is to develop well-trained sociologists who may choose a variety of career options and who are capable of initiating, evaluating and adapting to changes in the field.

The department has 12 full-time faculty, some, whom are collateral or joint appointed. The faculty represents a wide range of orientations and specializations. Members of the faculty make every attempt to involve students in their research projects and to aid them in their general intellectual development.

### Administration

**J. Sherwood Williams**

Professor and Department Chair

## Applied Social Research, Certificate in (Postbaccalaureate graduate certificate)

### Admission requirements summary

#### Applied Social Research, Certificate in (Postbaccalaureate graduate certificate)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Certificate	Fall	Aug 1	

The certificate program is designed (1) to enable practitioners to acquire additional knowledge and skills in applied social research without necessarily pursuing a graduate degree and (2) provide marketable job/career skills for graduate degree-seeking students in sociology as well as other graduate programs. Because the certificate program involves a limited number of credit hours and coordinates with the type of statistics and methods courses offered in a number of graduate degree programs, it may be pursued simultaneously with such programs as sociology, social work, public administration, social policy and urban services. At the same time, individuals seeking more limited, specialized training may pursue the certificate independently.

### Admission and matriculation requirements

Students possessing a B.A. or B.S. degree and beginning level skills in statistics/research methods are eligible for admission into the certificate program. Relevant course or research experience will be considered in evaluating admission and substitution of courses. Equivalency tests are available for required courses in statistics and methods. No more than six hours of substitution or equivalency credit will be granted. An overall GPA of 3.0 is required for award of the certificate, and no more than one grade of "C" may be earned in the certificate program curriculum.

### Curriculum

A total of 19 hours is required to earn the applied social research certificate. Four courses (12 credits) in statistics and research methods are required. In addition, two internship courses (four credits), which offer the opportunity for involvement in all phases of ongoing research projects, are required. One course (three credits) may be elected to develop more specialized types of research skills.

credits



**Required courses**

16

SOCY 601 Advanced Methods of Social Research (Prerequisites: SOCY 320 and SOCY/STAT 508 or equivalent)  
 SOCY 602 Applications of Advanced Research Methods (Prerequisites: SOCY 601 and SOCY/STAT 608)  
 SOCY 605/PADM 605 Survey Research Methods (Prerequisites: SOCY 601, SOCY 602, and SOCY/STAT 608, or permission of instructor)  
 SOCY 608/STAT 608 Advanced Statistical Methods (Prerequisite: SOCY/STAT 508 or permission of instructor)  
 SOCY 693 Applied Research Internship I  
 SOCY 693 Applied Research Internship II

**Elective courses**

3

SOCY 603 Seminar in Population Studies  
 SOCY 623 Causal Analysis  
 SWKD 729 Program Evaluation for Social Welfare Practice  
 SLWK 606 Social Welfare Policy, Community Planning and Organizational Practice II  
 SLWK 656 Social Planning II  
 MRBL 673 Marketing Research

## Gender Violence Intervention, Certificate in (Postbaccalaureate graduate certificate)

The certificate program is designed to:

1. enable current practitioners in community agencies to acquire additional knowledge and skills in sexual and domestic violence intervention, prevention and service management/administration without necessarily pursuing a graduate degree and
2. provide marketable job/career skills specific to this areas for graduate degree-seeking students in sociology or other graduate programs.

The certificate program may be pursued simultaneously with such programs as sociology, social work, criminal justice, public administration, social policy and urban services. At the same time, individuals seeking more limited, specialized training may pursue the certificate independently.

**Admission and matriculation requirements**

Students possessing a B.A. or B.S. degree are eligible for admission into the certificate program. Relevant course or practical experience will be considered in evaluating admission and substitution of courses. No more than six hours of substitution or equivalency credit will be granted. An overall GPA of 3.0 is required for award of the certificate, and no more than one grade of "C" may be earned in the certificate program curriculum.

**Curriculum**

A total of 18 hours is required to earn the certificate in gender violence intervention. Four courses (12 credits) are required. In addition, an internship course (three credits), which offers the opportunity for involvement in all phases of work in this field is required. For the remaining three credits, students may choose one of several elective options.

**Required courses**

credits

SOCY 601 Advanced Methods of Social Research	3
SOCY 635 Theorizing Gender Violence	3
SOCY 510 Domestic and Sexual Violence in Social Context	3
PADM 650 Principles of Nonprofit Management	3
SOCY 593 Internship in Domestic and Sexual Violence Issues	3

**Elective**

3

SOCY 660 Sociology of Women  
 PMCH 619 The Epidemiology and Prevention of Intentional Injury  
 SOCY 631 Battered Women in the Criminal Justice System  
 SOCY 633 Application of the Policy Process to Issues of Violence

## Sociology, Master of Science (M.S.)

**Admission requirements summary****Sociology, Master of Science (M.S.)**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.	Fall	Jul 1 (Feb for financial assistance)	15GRE
	Spring	Nov 15	

The Department of Sociology offers programs leading to the degree of Master of Science and the Certificate of Applied Social Research. The goal of the graduate program in sociology is to facilitate the development of theoretical, methodological and substantive competence appropriate for students' interests and career goals. In keeping with VCU's role as an urban institution, the program focuses on the study of urban social problems, policy alternatives and strategies for change.

**Admission requirements**

In addition to the general requirements for admission to graduate programs in the Graduate School and in the College of Humanities and Sciences, the following requirements represent the minimum acceptable standards for admission:

- Applicants must submit a transcript of their undergraduate course work and the results of their GRE in general aptitude (quantitative, analytical and verbal).
- Admission priority is given to students with an undergraduate GPA of 3.0 or higher on a 4.0 scale. Students with GPA below 3.0 will be evaluated by the director of graduate studies and members of the graduate faculty on the basis of the GRE scores, recommendations from references and other data submitted by applicants.
- To be admitted as a regular graduate student, applicants should have completed 24 semester hours in the social sciences (including history), with at least 12 credits in sociology. Undergraduate work in sociology should include a survey of sociological theory, research methods and statistics. Students who otherwise are qualified for admission but lack this background may be admitted provisionally, with the stipulation that they may be requested to make up any deficiencies specified by the director of graduate studies. Nondegree or "special" students must apply for regular student status after completing six sociology graduate credits.

Because of the diversity in different institutions of higher education, students trained abroad may be judged on an individual basis. Criteria on which this judgment is based include the reputation of the foreign university, the student's academic record, proficiency in English and recommendations from professors. VCU requires that foreign students demonstrate guarantees of financial support.

A limited number of assistantships are available for qualified applicants. Applicants for assistantships should have their files complete by Feb. 15.



Individuals not applying for assistantships should file their applications for graduate study as early as possible to permit adequate review and to ensure consideration. Applications that reach VCU after July 1 for the fall semester and after Nov. 15 for the spring semester may not be processed in time for registration.

## Degree requirements

Two options are available for students pursuing a master's degree in sociology. Students must receive approval from the director of graduate studies before choosing either option.

### Thesis option

Thirty-six hours of graduate course work must be completed including the following core courses: SOCY 502 Contemporary Sociological Theory, SOCY 601 Advanced Methods of Social Research, SOCY 602 Applications of Advanced Research Methods, and SOCY 608/STAT 608 Statistics for Social Research. A master's thesis will be developed under the guidance of the thesis committee (three faculty members including a thesis adviser) and must be defended publicly. The student may present up to six thesis credits for graduation. Up to six credits of independent study may be presented, as well as six credits outside the department.

### Concentration option

Requirements are identical to the thesis option except for the following: (a) Students must complete 36 semester hours of course work; (b) Students must declare a concentration option prior to completing 28 hours of course work; (c) Students, in consultation with their advisers, will select an advisory committee (three faculty members including the adviser) that will develop an area of concentration consisting of 15 credits. Six of these credits may be taken prior to committee approval of the concentration area. Of the 15 hours, students may take up to nine credits outside the department, or six credits of independent study, provided the advisory committee approves. At no time should the combination of independent study hours and courses taken outside the department exceed nine hours. Students will receive certification of the concentration area by having it listed on their transcripts; (d) Students will submit to their advisory committee a "concentration area paper" that must demonstrate competence in the subject matter by reviewing literature and discussing prominent issues. Students must enroll for one credit of independent study while working on the concentration area paper. (A maximum of one credit of independent study for the purpose of writing the paper may be applied to the degree.)

For all candidates, an overall GPA of at least 3.0 ("B") must be maintained in order to receive a degree. A student who does not maintain a 3.0 average may be dropped from the master's program at any time by the graduate program director. A review of all first-year graduate students will be conducted at the end of their second semester by the graduate program director and three appointed faculty members. The purpose of this review will be to assess all first-year students on their satisfactory/unsatisfactory progress toward the master's degree.

## Accelerated Bachelor of Science (B.S.) and Master of Science (M.S.) in Sociology

The accelerated B.S. and M.S. program allows qualified students, with a major in sociology, to earn both degrees in a minimum of five years by completing approved graduate courses during the senior year of their undergraduate program. The program will provide students with the opportunity to expand and deepen their knowledge of sociology, enhance their credentials for the job market and/or to prepare for further

professional education. Students in the program may count up to 12 hours of graduate courses toward both the B.S. and M.S. degrees. Thus, the two degrees may be earned with a minimum of 144 hours instead of the 156 required if the degrees are pursued separately.

The program is restricted to students who have demonstrated a clear interest in sociology. Minimum qualifications for admittance to the program include completion of 90 undergraduate credit hours with an overall GPA of 3.0, and a minimum of nine credit hours in sociology with a GPA of 3.3. Prior to being formally considered for admittance and before enrolling in graduate courses, the student must complete the graduate school application, submit GRE general aptitude scores and supply supporting information required for admission. All persons admitted to the program must meet the graduate student standards of performance, e.g., maintain a 3.0 GPA, and satisfactorily complete all requirements for the degree.

The director of graduate studies will provide guidance of students in this program. Students who are interested in this program should consult with the director of graduate studies or the director of undergraduate studies before they have completed 90 credits. Both directors may be contacted for more information about admission procedures.

Requirements for the Bachelor of Science in Sociology include the completion of a minimum of 120 credits. Students in the accelerated program may take up to six graduate sociology credits in each of the final two semesters of their undergraduate course work. These courses are shared credits with the graduate program, meaning that they will be applied to both undergraduate and graduate degree requirements. A maximum of 12 graduate credits may be taken prior to completion of the baccalaureate degree.

The Bachelor of Science degree will be awarded when the student has completed all requirements for the undergraduate degree, which may include the 12 graduate sociology credits. The graduate sociology courses that may be taken, once a student is admitted to the program, are:

- SOCY 502 Contemporary Sociological Theory (may be used to meet the undergraduate major requirement for SOCY 402 Sociological Theory and is a required course in the graduate program)
- SOCY/STAT 508 Introduction to Social Statistics (recommended and may fulfill elective requirement in the undergraduate major)
- SOCY 601 Advanced Methods of Social Research – Prerequisite SOCY/POLI 320 (a required course in the graduate program and may fulfill elective requirement in the undergraduate major)
- SOCY/STAT 608 Statistics for Social Research (a required course in the graduate program and may fulfill elective requirement in the undergraduate major)
- Other SOCY graduate courses, with the approval of the director of graduate studies, may serve as an elective requirement for the M.S. degree and an elective for the undergraduate major.

All accelerated program students must have their schedules approved by the director of graduate studies prior to registration.

## Department of Statistical Sciences and Operations Research

The Department of Statistical Sciences and Operations Research offers programs leading to a Bachelor of Science in Mathematical Sciences and a Master of Science in Mathematical Sciences with a concentration in either operations research or statistics. The curriculum of both programs is

run jointly with the [Department of Mathematics and Applied Mathematics](#).

The department also offers a postbaccalaureate undergraduate certificate in statistics. This certification program in statistics is designed to allow students with undergraduate majors in various disciplines an opportunity to acquire the formal training in statistics that currently is in demand in industry and government. Some students also may find this program a useful way to prepare for graduate study in statistics. Students seeking more information or wishing to enter the certificate program should contact the Department of Statistical Sciences and Operations Research.

## Administration

### D'Arcy P. Mays

Associate Professor and Department Chair

## Mathematical Sciences, Master of Science (M.S.)

### Admission requirements summary

#### Mathematical Sciences, Master of Science (M.S.)

Indicate specialization:

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.	Fall	Apr 1 Priority deadline for funding consideration Nov 1	GRE-General

Spring

Special requirements:

Contact director of graduate studies for specific admission requirements

A Master of Science in Mathematical Sciences is offered jointly by the Department of Mathematics and Applied Mathematics and the Department of Statistical Sciences and Operations Research. The Master of Science in Mathematical Sciences offers specializations in several possible areas, including applied mathematics, mathematics, operations research, statistics, discrete structures and others.

### Admission requirements

In addition to the general requirements for admission to graduate programs listed in the [Graduate Studies at VCU](#) section and the [College of Humanities and Sciences](#) section of this bulletin, the following requirements represent the minimum acceptable standards for admission:

- Thirty credits in undergraduate mathematical sciences, computer science or related areas of which at least 18 semester credits must represent upper-level courses.
- Three letters of recommendation pertaining to the student's potential ability as a graduate student in mathematical sciences.
- General GRE scores required.

Provisional admission may be granted when deficiencies exist. These deficiencies must be removed by the end of the first year of residence, or its part-time equivalent, when the student's application will be re-examined. Courses that are remedial or designed to remove deficiencies will not be accepted for credit toward the fulfillment of the course requirements for the master's degree.

### Degree requirements

The program offers maximum flexibility by allowing students, in

consultation with their graduate committees, to design a course of study that will best develop competence in those areas most relevant to their scholarly and professional objectives. This program consists of a minimum of 30 semester credits of which at least 15 must be at the 600 level.

Students may obtain a designation on their transcripts indicating that their graduate study has emphasized one of the following graduate concentrations by completing the requirements that are listed here for that concentration. A student who has not satisfied the requirements for one of these concentrations, but who has otherwise fulfilled all the requirements for a master's degree, will be awarded a degree of Master of Science in Mathematical Sciences without any specialization.

- applied mathematics
- mathematics
- operations research
- statistics

Note that the following courses cannot be applied to the credit requirements for the M.S. in Mathematical Sciences: STAT/SOCY 508, STAT/BIOS/EPID 543 and STAT/SOCY 608.

### Curricula

#### Mathematics and applied mathematics concentrations

Each student will select either the thesis or non-thesis option. If a student chooses the non-thesis option, they must complete a directed research project and a comprehensive examination. If a student elects to write a thesis, the student's adviser determines the number of credits completed in MATH 698.

#### Non-thesis option

Mathematical sciences (including both semesters of a 600-level sequence)	21
Mathematical sciences or allied field*	6-9
Research Seminar credits**	2-5
Directed research credits**	0-3
	<hr/>
	30

#### Thesis option

Mathematical sciences (including both semesters of a 600-level sequence)	18
Mathematical sciences or allied field*	6-9
Thesis credits	3 or 6
Research seminar credits**	1-3
Directed research credits**	0-3
	<hr/>
	30

\* Courses selected from an allied field must be approved by the department's Graduate Affairs Committee.

\*\* The student who chooses the non-thesis option may receive a maximum total of four credits for MATH 690 Research Seminar and MATH 697 Directed Research. The student who chooses the thesis option usually will not take directed research, but he or she is not prohibited from doing so. In the thesis option, a total of seven credits for thesis, research seminar and directed research is the maximum credit permitted.

#### Statistics and operations research concentrations

Each student will complete either a thesis or an applied project. A student who chooses the thesis option has a choice of writing a research thesis or an expository thesis. A research thesis is one that, in the opinion of the

student's thesis adviser and thesis committee, contains significant original research. For this thesis, the student may count six credits of STAT 698 or OPER 698. Otherwise, a student may write an expository thesis. For this type of thesis, the student may count three credits of STAT 698 or OPER 698.

The student who elects the applied project must prepare a written report of the project and make an oral presentation; these students may count three credits of STAT 696 or OPER 696. Students cannot receive credit for both STAT/OPER 696 and STAT/OPER 698.

Mathematical sciences (including both semesters of a 600-level sequence)	18
Mathematical sciences or allied field*	6-9
Thesis or applied project credits	3 or 6
Directed research credits**	0-3
	<hr/> 30

\* Courses selected from an allied field must be approved by the department's Graduate Affairs Committee.

\*\* A student can receive a maximum of six credits in thesis/applied project and directed research. Hence a student who writes a six-credit thesis cannot receive any directed research credits. A student who completes a three-credit thesis or the applied project, however, may receive up to three directed research credits.

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### Applied mathematics concentration

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#### Master of Science in Mathematical Sciences with a concentration in applied mathematics

MATH 517, 518\*; a six-credit sequence selected from MATH 617-618, 619, 620, 621 and at least six credits selected from MATH 511, 512, 515, 516, 615, 689, STAT 513-514. Also, at least one seminar and the thesis (if chosen) must concern topics of applied mathematics.

\* If a student previously received credit for one or both of these courses or their equivalent, then one or two of the other courses mentioned for this concentration must be taken as substitute(s) to satisfy the minimum requirement of 15 credits of course work in the concentration.

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### Mathematics concentration

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#### Master of Science in Mathematical Sciences with a concentration in mathematics

MATH 507, 508\*; a six-credit sequence selected from 601-602, 603-604, 607-608, 611-612, and at least three credits from MATH 505, 509, 510, 521, 525 or any otherwise uncounted 600-level course for this concentration. Also, at least one seminar and the thesis (if chosen) must concern topics of pure mathematics.

\* If a student previously received credit for one or both of these courses or their equivalent, then one or two of the other courses mentioned for this concentration must be taken as substitute(s) to satisfy the minimum requirement of 15 credits of course work in the concentration.

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### Operations research concentration

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#### Master of Science in Mathematical Sciences with a concentration in operations research

OPER 527-528; STAT 541; OPER 690; OPER 696 or 698; and at least six additional credits selected from OPER 631, 635, 641, 643, 645, 647, 648, 649, and approved 691\*. The applied project or thesis must concern topics of operations research.

\* Use of OPER 691 to meet this requirement must be approved by the Department of Statistical Sciences and Operations Research and the Graduate Affairs Committee of the department at the time the course is scheduled.

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### Statistics concentration

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#### Master of Science in Mathematical Sciences with a concentration in statistics

STAT 513-514\*; STAT 690; STAT 696 or 698; and at least nine additional credits selected from STAT 623, 642, 643, 644, 645, 648, 649 and approved 691\*\*. The applied project or thesis must concern topics of statistics.

\* If a student previously received credit for one or both of these courses or their equivalent, then one or two of the other courses mentioned for this concentration must be taken as substitute(s) to satisfy the minimum requirement of 15 credits of course work in the concentration.

\*\* Use of STAT 691 to meet this requirement must be approved by the Department of Statistical Sciences and Operations Research and the Graduate Affairs Committee of the department at the time the course is scheduled.

# School of Allied Health Professions

The School of Allied Health Professions was established on Jan. 1, 1969, to provide an administrative structure for existing educational programs in allied health disciplines and to direct the development of new programs in response to the growing need for allied health manpower. At the outset, the school incorporated existing educational programs for hospital administration, medical technology, physical therapy and radiologic technology. A program for nurse anesthesia was inaugurated as a separate department in 1969; an existing educational program in occupational therapy was transferred administratively to the School of Allied Health Professions in 1970, and a teaching program in patient counseling formerly based within MCV Hospitals was integrated with the school, also in 1970. A doctor of philosophy program in health services organization and research, the first doctoral program for the School of Allied Health Professions, was introduced in 1982. In 1985, the existing Department of Gerontology was transferred administratively to the School of Allied Health Professions. In June 1988, an executive master's program in health administration was introduced. An entry-level master's degree professional program in physical therapy was initiated for students matriculating in August 1989. On July 1, 1994 the Department of Rehabilitation Counseling was transferred from the School of Community and Public Affairs to the School of Allied Health Professions. A distance-learning, interdisciplinary doctoral program — the Ph.D. in Health Related Sciences — began accepting students in the fall 1998 semester. This program was developed in response to the national demand for doctorally prepared faculty and practitioners in the allied health professions. Recent program developments include the initiation of an entry-level master's degree program in occupational therapy and the subsequent closure of their undergraduate program (1998); the initiation of a Master of Science degree offering in the Department of Patient Counseling (2000); the start of a joint degree program, the M.D./M.H.A., offered by the Department of Health Administration and the School of Medicine (2001); and the initiation of the professional doctor of physical therapy degree (2002).

## Administration

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Assistant Dean

**Shelly J. Lane**  
Assistant Dean

**Debra A. Ropelewski**  
Assistant Dean for Fiscal Affairs

**Jeffrey R. Lodge**  
Director of Information Systems

## Philosophy

The faculty of the school is committed to offering, through the establishment and maintenance of rigorous standards of excellence, educational programs that will prepare students for professional careers in the allied health disciplines. Development of professional attitudes, emotional maturity and ethical behavior of students is a vital component of

the educational process. It is essential that students gain a deep respect for the dignity of human beings and the inherent rights of patients and others who receive services. The programs are designed to include not only the development of skills to assure excellence in quality of health care, but also factual knowledge and experiences that will provide the basis for continuing intellectual and professional growth.

Community services of the school and faculty include continuing education, consultative resources and participation in all pertinent areas of health care. An integral part of these efforts is to stimulate and sponsor research activities in the allied health disciplines represented within the school and to encourage interdisciplinary research.

## Licensure/certification

Graduates of most of the programs offered in the School of Allied Health Professions are required or eligible to take national and/or state certification or licensure examinations. Requirements of licensing and certifying agencies vary. Some licensure and certification agencies consider individuals convicted of a felony ineligible for licensure or certification. For information, prospective students should contact the licensure or certification agency for the specific allied health discipline.

## Attendance regulations

The faculty considers attendance at lectures, laboratories and other functions a requisite to the successful acquisition of the knowledge and skills required of the professional. Hence, the faculty cannot condone absence without good reason from any regularly scheduled educational experience. At the beginning of each course, instructors relate to their classes the policy of the department concerning the attendance regulations for that semester. The nature of make-up work in the event of absence will be the prerogative of the instructor.

## Student performance and behavior

The goals and objectives of the School of Allied Health Professions and its component departments and programs relate to the education of persons preparing for professional careers in the allied health disciplines. An integral requisite of students and practitioners is an undeviating acceptance of a professional attitude and pride that will motivate them to adhere to a code of professional ethics and to develop fully their competencies for practice.

The suitability of student performance and behavior relating to these professions and to the consumers of health care is a paramount concern of the administration and faculty of this school. To assure a quality of educational and clinical preparation for its graduates, the following statement is promulgated:

If, in the judgment of the faculty and administration of the School of Allied Health Professions, a student is not considered suitable for emotional, professional or related reasons, the student's academic status may be appropriately altered.

If any questions arise regarding the standards of performance or behavior, it is the responsibility of students to apprise themselves of acceptable character and conduct requirements prior to matriculation in the designated department or program.

## Graduate programs

Graduate degree and certificate program offerings in the School of Allied Health Professions are designed as basic professional or advanced-level programs. Accreditation requirements for the individual programs preclude the establishment of general admission prerequisites, registration dates, and course and degree requirements beyond those of the Graduate School.

It is the intent that these regulations and procedures for each program ensure the selection of applicants whose motivation, ability, character and health status qualify them to pursue graduate study successfully. Specific information may be found in the departmental presentations in this section or are available from departmental graduate coordinators.

Both entry- and advanced-level professional, graduate and certificate programs are offered by the School of Allied Health Professions. Graduate programs in this school and the degrees conferred on their graduates are:

#### **School of Allied Health Professions**

Ph.D. in Health Related Sciences

#### **Department of Clinical Laboratory Sciences**

Master of Science

#### **Department of Gerontology**

Master of Science

#### **Department of Health Administration**

Master of Health Administration

Master of Health Administration and Juris Doctor degrees cosponsored by the T. C. Williams School of Law at the University of Richmond and the Washington and Lee University School of Law  
Master of Science in Health Administration (Professional M.S.H.A. Program – Online)

Ph.D. in Health Services Organization and Research

Doctor of Medicine and Master of Health Administration degrees cosponsored by the School of Medicine

#### **Department of Nurse Anesthesia**

Master of Science in Nurse Anesthesia

#### **Department of Occupational Therapy**

Master of Science in Occupational Therapy

Master of Science

#### **Program in Patient Counseling**

Master of Science

#### **Department of Physical Therapy**

Doctor of Physical Therapy

Ph.D. in conjunction with the departments of Anatomy or Physiology

Ph.D. in Rehabilitation and Movement Science

#### **Department of Rehabilitation Counseling**

Master of Science

Master of Science in Rehabilitation Counseling and certificate in aging studies

Professional certificate programs currently are offered by the following departments and programs.

#### **Department of Gerontology**

Certificate in aging studies

Certificate in aging studies and Master of Social Work (jointly with the School of Social Work)

#### **Program in Patient Counseling**

Postgraduate certificate in patient counseling

Joint Master of Science in Patient Counseling and Master of Divinity with the School of Theology at Virginia Union University and the Baptist Theological Seminary in Richmond

#### **Department of Rehabilitation Counseling**

Postgraduate certificate in professional counseling

#### **Accreditation**

The School of Allied Health Professions is an institutional member of the American Society of Allied Health Professions and the Virginia Association of Allied Health Professions. All of its programs are approved or accredited by the appropriate national professional or educational organizations.

Clinical Laboratory Sciences (bachelor's degree)

National Accrediting Agency for Clinical Laboratory Sciences

Health Administration (master's and executive master's degrees)

Commission on Accreditation of Healthcare Management Education

Nuclear Medicine Technology (bachelor's degree)

Joint Review Committee on Educational Programs in Nuclear Medicine Technology

Nurse Anesthesia (master's degree)

Council on Accreditation of Nurse Anesthesia Educational Programs

Graduates are eligible to take the examination for certification conducted by the Council on Certification of Nurse Anesthetists.

Occupational Therapy (master's degree)

Accreditation Council for Occupational Therapy Education

Patient Counseling (certificate)

Association for Clinical Pastoral Education

Physical Therapy (D.P.T.)

Commission on Accreditation in Physical Therapy Education, American Physical Therapy Association

Radiation Therapy Technology (bachelor's degree)

Joint Review Committee on Education in Radiologic Technology

Radiography (bachelor's degree)

Joint Review Committee on Education in Radiologic Technology

Rehabilitation Counseling (master's degree)

Council on Rehabilitation Education

## **Health Related Sciences, Doctor of Philosophy (Ph.D.)**

### **Admission requirements summary**

#### **Health Related Sciences, Doctor of Philosophy (Ph.D.)**

Indicate specialization:

Clinical Laboratory Sciences, Gerontology, Health Administration, Nurse Anesthesia, Occupational Therapy, Physical Therapy, Radiation Sciences or Rehabilitation Leadership

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall	Mar 15	GRE or MAT

#### **Special requirements:**

Contact School of Allied Health Professions Dean's Office for specific admission requirements

#### **J. James Cotter**

Associate Professor and Assistant Dean, School of Allied Health Professions

The Doctor of Philosophy Program in Health Related Sciences in the School of Allied Health Professions was designed as a distance learning program with the cooperation and commitment of the nine departments of the school: Clinical Laboratory Sciences, Gerontology, Health Administration, Nurse Anesthesia, Occupational Therapy, Patient Counseling, Physical Therapy, Radiation Sciences and Rehabilitation

## Counseling.

The mission of the School of Allied Health Professions is to serve as an international leader in the education of excellent, innovative and responsible allied health professionals. Educational formats that are technologically advanced and accessible to students through on-campus and distance learning are emphasized throughout all programs in the school. In addition, the school promotes excellence in health care service and encourages collaborative research that generates state-of-the-art and specialized knowledge.

This doctoral program involves a four-year course of study. It is designed to meet the critical need for doctorally prepared allied health professionals across the nation, specifically in the areas of teaching, research and administration. The departments of the School of Allied Health Professions offer a doctoral curriculum with a common interdisciplinary core of courses and eight specialty tracks germane to the disciplines of the participating departments. The ninth department of the school is Patient Counseling. This department is participating by teaching the course in ethics as part of the doctoral program.

## Program instructional goals

The goal of the doctoral program in health related sciences is to provide experienced health professionals with advanced knowledge and skills so that they may assume positions in teaching, research and administration upon graduation. This doctoral program emphasizes both an interdisciplinary and multimedia focus, drawing from resources across the university. The overall objectives of this doctoral program are to produce scholars who have:

- the ability to understand, analyze, design, execute and evaluate research and practice in the allied health sciences, with particular in-depth understanding in the chosen area of specialization,
- the ability to translate research knowledge and principles into applied practice perspectives and skills,
- the ability to teach the current principles and content of the allied health sciences,
- the ability to do research, practice and teach in the area of interdisciplinary health care practice,
- the ability to continually examine current and future changes in the allied health disciplines from an interdisciplinary perspective,
- a demonstrated knowledge and understanding of professional and ethical responsibility and conduct in the allied health professions, and
- a demonstrated knowledge and understanding of ethnic issues and cultural diversity in health care delivery and health policy.

## Facilities

The administrative offices for the program are located on the MCV Campus, at 1200 E. Broad St. (West Hospital, First Floor, East Wing). The program's state-of-the-art computer laboratory is located in Tompkins-McCaw Library, at 509 N. 12th St.

## Admission

### Admission criteria

Admission to the program, which is open to students with clear career

goals in the health related sciences, is limited and competitive. Therefore, work experience in a health-related field is encouraged.

Applicants to the program must meet the following admission criteria:

- have an earned master's degree in an academic or allied health-related field from an accredited college or university,
- have a minimum cumulative GPA of 3.3 on their master's-level work,
- have completed a graduate course in statistics with a grade of "B" or better,
- have earned a minimum combined score of 1100 on the verbal and quantitative sections of the Graduate Record Exam (GRE) or a minimum score of 420 on the Miller's Analogies Test (MAT). Tests must have been taken within the past five years,
- when applicable, have a minimum Test of English as a Foreign Language (TOEFL) score of 600,
- demonstrate a record of professional competency and success, and
- articulate clear professional and educational goals and written communication skills through the submission of a written essay.

Enrollment in the program is open to qualified persons without regard to age, race, sex, religion, disability or national origin. Admission requirements are in compliance with all applicable federal and state statutes, orders and regulations, and university guidelines.

### Admission procedures

Prior to reviewing an application for admission, the program must receive:

- a completed application form from the applicant, including:
  - three letters of recommendation, two of which preferably are from sources qualified to assess the candidate's academic potential,
  - a written essay that discusses career goals and the manner in which this doctoral program will enhance those goals, and what the applicant expects to contribute to this program, and
  - a curriculum vitae;
- official transcripts indicating completion of baccalaureate and master's degrees (or equivalent) from an accredited college or university, and
- GRE or MAT scores.

Incomplete packages may not be reviewed. Materials are sent to the Graduate School for processing and then forwarded to the School of Allied Health Professions. Once received in the school, the application is reviewed for completeness. Applicants with incomplete files will be contacted regarding the missing materials. Incomplete files will be held in the director's office until all materials are received.

Completed folders will be sent to the respective departmental representative of the School of Allied Health Professions Doctoral Program Advisory Committee (D-PAC). Departments will then rank qualified applicants and, based on a review of the file, a personal interview will be scheduled at the department's discretion for their top candidates. Following the departmental ranking, all files will be returned to the director's office.

The D-PAC will meet to select and recommend the incoming class. The director and the dean of the School of Allied Health Professions are responsible for the final decision.



Applicants will be notified by the dean of the Graduate School regarding the admission decision and of the deadline for their acceptance of the offer and holding fee.

#### **Part-time status**

The program will be open to part-time students, although students are encouraged to enroll full time.

### **Advising**

Upon admission to the program, students will be assigned an interim adviser to guide them through the core courses and assist them as they consider their area of research. All program advisers will have an earned doctorate and be a member of the university's graduate faculty.

Students may change their interim adviser as their programs of study and interests evolve, if approved by the program director. Although discouraged, some students may wish to switch their area of specialization (changing from the department through which they were initially admitted to the program.) Students who want to change specialization areas must petition the doctoral program director. The petition must be approved by the program director, the D-PAC and the appropriate department chair. There is no guarantee that the applicant will be accepted into the new specialization area.

After successful completion of the comprehensive examinations, students will choose a dissertation chair who will serve as adviser and guide them through their research/dissertation process.

### **Program continuation and completion requirements**

#### **Continuation requirements**

After admission to the Ph.D. program, the student must maintain a minimum cumulative GPA of 3.0 in all course work completed at VCU. A student who falls below that minimum will have one semester to remedy the deficiency. Even with an overall GPA of 3.0 or better, a student may earn no more than two (six credit hours) grades of "C." A student who receives a grade of "D" or "F" will be reviewed for continuation in the program by the department of their specialization.

Students are expected to maintain continuous enrollment while in the program. Following the completion of the core course work, students must register for at least one credit hour each fall and spring semester for continuation in the program. A student who fails to register must have advance approval to do so or will be dropped automatically from the program and must reapply for reinstatement. The maximum time to complete all of the requirements for the degree is seven calendar years from the date of entry into the program.

#### **Course transfer or waiver**

A maximum of 25 percent of the course work other than research may be transferred from another VCU program or outside institution and applied toward the Ph.D. course requirements. Transfer and waiver credit is given at the discretion of the program director after consultation with appropriate faculty members, subject to university approval. Courses taken as requirements for other degrees are not transferable. A waiver may be warranted if an equivalent course was taken. However, another course must be substituted for the waived course in order to fulfill the requisite 51 credit hours needed for degree completion.

#### **Comprehensive examination**

The purpose of the comprehensive examination is to provide a vehicle through which students can demonstrate the ability to integrate their educational experience by adequately addressing complex questions pertinent to the current and developing knowledge of the allied health fields. Students are eligible to take each of the two comprehensive examinations upon successful completion of the appropriate core course work. The core exam must be taken within six months of completing the methods exam.

Two written examinations will be administered, one for the common interdisciplinary core and one for the research methods core. A three-member graduate faculty committee will develop and administer each exam. This committee will be made up of two members of the Core Advisory Committee and one member appointed by the program director. Each exam will be offered once in the fall semester, and once in the spring semester. Prior to completion of the semester in which the student becomes eligible to take each exam, he/she must submit a formal statement of intent to the program coordinator.

Students who receive a failing grade on their initial attempt will have one opportunity to repeat each comprehensive examination. Failure to pass an exam on the second attempt will result in termination from the program.

#### **Program completion requirements**

The doctor of philosophy degree is awarded after (1) the minimum 51 credit hours of course work are completed; (2) comprehensive exams are passed; and (3) either a dissertation is written and defended orally, or three first-author articles of publishable quality on research undertaken by the doctoral candidate once enrolled in the program are written and defended orally. The journal articles will be scrutinized for quality of scholarship by an internal research committee headed by the student's research adviser. All three articles must be approved by the internal research committee prior to submission.

### **Curriculum structure**

The proposed curriculum is designed to take four years to complete. Students spend the first two and one-half years (six-month-long semesters) completing course work. The final year and one-half is spent developing the doctoral dissertation. Research components are present in each year of the program and a research emphasis is present throughout the entire curriculum. The student is required to designate the area of intended research in her/his specialization area in the first year.

Each of the five course-work semesters is composed of both on- and off-campus components. On-campus sessions, scheduled during the end of June and beginning of July, and the end of December and beginning of January, will employ a rather traditional mix of educational technologies (e.g., lectures, seminars and assigned reading). During the off-campus component of each semester, students pursue their studies employing a wide variety of innovative educational technologies (e.g., computer conferencing, computer-aided instruction, videotape packages and programmed instructional material), in addition to assigned readings and the completion of various assignments and projects. Upon completion of the five semesters of course work, students are required to return to campus each semester until a research proposal has been developed and successfully defended.

The program curriculum consists of a total of 51 credit hours (18 credits of common interdisciplinary core courses, 12 credits of research methods core courses, nine hours of specialty track courses and 12 hours of dissertation research). The courses, arranged by focal area are:

## credits

**Semester 1**

ALHP 701 Health Services Delivery Systems	3
ALHP 712 Multimedia Technology and Curriculum Design for Health Care Professionals	3
ALHP 760 Biostatistical Methods for Health Related Sciences	3

**Semester 2**

ALHP 702 Finance and Economic Theory for Health Care	3
ALHP 761 Health Related Sciences Research Design	3
ALHP 762 Multivariate Statistical Methods for Health Related Sciences Research	3

**Semester 3**

ALHP 718 Health Informatics	3
ALHP 763 Clinical Outcomes Evaluation for Health Related Sciences	3
ALHP 781 Doctoral Seminar in Health Related Sciences	3
Methods Comprehensive Exam	

**Semester 4**

ALHP 708 Ethics and Health Care	3
ALHP 716 Grant Writing and Project Management in Health Related Sciences	3
ALHP 890 Dissertation Seminar	3
Core Comprehensive Exam	

**Semester 5**

ALHP 792 Independent Study	1-4 (3 required)
ALHP 793 Research Practicum	3
ALHP 899 Dissertation Research	9

**Semester 6**

ALHP 899 Dissertation Research	
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**Semester 7**

ALHP 899 Dissertation Research	
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**Semester 8**

ALHP 899 Dissertation Research	
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51

Note: All three of the specialty track courses and the dissertation research courses are taken in one of the following areas, and each of the departments have curricular section numbers for each of the respective courses (ALHP 781, ALHP 792, ALHP 793 and ALHP 899):

- Section 001 Clinical Laboratory Sciences
- Section 002 Gerontology
- Section 003 Health Administration
- Section 004 Nurse Anesthesia
- Section 005 Occupational Therapy
- Section 006 Physical Therapy
- Section 007 Radiation Sciences
- Section 008 Rehabilitation Counseling

**Dissertation and published research requirements****Admission to candidacy**

Students are eligible to begin their dissertation upon written certification by the program director that all predissertation/research requirements, including the comprehensive examinations, have been satisfied and that the student is prepared to proceed with the dissertation/research project. Copies of the certification will be forwarded to the student, the student's formal program adviser and the dean of the School of Allied Health Professions. After admission to candidacy, students will proceed to propose, complete and defend their dissertation or three journal articles research requirement.

**Enrollment requirement**

Students are required to maintain continuous enrollment in ALHP 899

Dissertation Research until completion of the requirements, including the defense process. A minimum of three credit hours per semester are required until nine credits are accumulated, after which only one credit per semester is required unless otherwise specified by the student's dissertation chair.

**Dissertation/research committee**

After successful completion of the comprehensive exam, the student nominates a dissertation/research committee and the dissertation/research director submits the nominations in writing to the program director. Such committees will consist of a minimum of four graduate faculty members, one of whom will be outside the student's specialty track. The program director will provide written approval of the dissertation/research committee and clear such appointments with the appropriate administrative officials.

**Dissertation/research standards**

The dissertation or publishable research articles must represent independent research and should be based on an original research question or hypothesis. Generally, dissertations or publishable research articles will demonstrate the student's ability with empirical research, adhering to canons of (1) logic in conceptualization and design, (2) valid and reliable measurement, (3) appropriate analytic technique and (4) appropriate interpretation of results. Studies should be based on a formal theoretical or conceptually explicit framework for investigating a question or testing a hypothesis relevant to the allied health field.

**Tuition and fees**

Graduate tuition and fees will be assessed in accordance with rates approved annually by the VCU Board of Visitors. In addition to tuition, a program-specific fee is assessed for this distance-learning program. Tuition and fees include all direct program costs and the use of the university's computing systems. An additional fee may be charged for learning materials distributed during a course.

**Computer requirements**

Students are encouraged to have a working knowledge of Word for Windows 95. All students must have access to a contemporary IBM-compatible personal computer equipped with a printer and a 28.8 baud modem. Although students can use a personal computer at the office, it is strongly recommended that they have one at home.

**Financial aid**

Students must apply directly to the financial aid office for consideration. In addition, when other support is available to students, all will be notified of the eligibility criteria and application procedures.

**Due process**

All appeals to decisions based on this document are made to the program director. In the event that satisfactory resolution is not attained, the next level of appeal is the dean of the School of Allied Health Professions. Students in the program are governed by the School of Allied Health Professions Student Academic Appeal Policy and Procedures document, which was developed in compliance with university guidelines. Exception to any of the policies and procedures identified in this document require the written consent of the program director and, when necessary, the dean of the school.

## Department of Clinical Laboratory Sciences

The Department of Clinical Laboratory Sciences supports the philosophy and mission of the university and the School of Allied Health Professions. The departmental graduate program is dedicated to enhancing and promoting clinical laboratory science. By providing advanced theoretical and technical education, the program serves to maintain and update the competency of laboratory professionals and to prepare students to assume roles as laboratory supervisors, university educators and researchers. A mature, responsible approach to the acquisition of knowledge is cultivated in order to establish continuing intellectual growth and an enthusiasm for the profession.

### Administration

**Teresa S. Nadder**

Associate Professor and Department Chair

### History

The graduate program leading to a Master of Science in Clinical Laboratory Sciences was started in 1967 to provide advanced education for certified medical technologists/clinical laboratory scientists. The program was modified in 1985 to allow candidates holding degrees in other areas of science to obtain graduate education in clinical laboratory sciences. In 2003, the accelerated track, which integrates undergraduate and graduate course work with the subsequent awarding of a Bachelor of Science and Master of Science degree simultaneously, was added.

### Facilities

The Department of Clinical Laboratory Sciences is located in the Randolph-Minor Annex Building on the MCV Campus. All faculty and clerical offices are located in this facility, as well as student classrooms, general teaching laboratory, computer facilities and a student lounge/reading room.

## Clinical Laboratory Sciences, Master of Science (M.S.)

### Admission requirements summary

#### Clinical Laboratory Sciences, Master of Science (M.S.)

Indicate specialization:

#### Objectives

The objectives of the Department of Clinical Laboratory Sciences master's program are to:

- provide the student with a superior, yet flexible, course of advanced study in clinical laboratory sciences,
- prepare the student to critically evaluate the literature related to laboratory issues and to produce future advances within laboratory sciences,
- foster the continued development of interpersonal communication skills and ethical principles,

- develop and promote strategies for lifelong learning and encourage continued professional growth through research, education and active participation in professional societies, and
- provide society and the commonwealth of Virginia with a source of highly competent professional laboratorians capable of functioning effectively in leadership roles within the field of clinical laboratory sciences.

### Financial aid

Students must apply through the financial aid office for assistance. Refer to the [general section on financial aid in this bulletin](#) for details of the programs available. In addition, there are limited funds from departmental and professional sources. When this support is available, all students will be notified of the eligibility criteria and application procedures.

### Admission requirements

In order to meet the needs of all individuals interested in continuing their education in the field, the Department of Clinical Laboratory Sciences has modified its graduate curriculum to accommodate a diverse group of candidates, including full- and part-time students. The program is highly flexible, allowing students to select course work that meets their specific needs once the basic program requirements have been met.

The general entrance requirements for the Master of Science in Clinical Laboratory Sciences (for the Advanced and Categorical tracks) are:

- baccalaureate degree from an accredited college or university with a major in: clinical laboratory sciences (medical technology) for the advanced track; biology or chemistry for the categorical track,
- minimum undergraduate GPA of 2.7 on a 4.0 scale for at least the last two years of undergraduate work,
- minimum TOEFL of 550 for international students whose native language is not exclusively English,
- satisfactory scores on the GRE and
- recommended, but not required, are two letters from employers or recent instructors addressing academic potential.

The entrance requirements for the Master of Science in Clinical Laboratory Sciences — accelerated track are:

- acceptance into the B.S. degree program in clinical laboratory sciences,
- completion of 52.5 hours of CLLS professional courses with a minimum GPA of 2.7 and
- satisfactory GRE scores.

### Guaranteed admission

VCU students participating in the University Honors Program may apply for guaranteed admission to the Master of Science in Clinical Laboratory Sciences program. Refer to the [general section on admissions through honors](#) in this bulletin for details of the program. The Department of Clinical Laboratory Sciences also has agreements for guaranteed admission into the Master of Science program with the following institutions: Averett University, Eastern Mennonite University, Ferrum College, George Mason University, Hollins University, Mary Baldwin College, Radford University and Roanoke College in Virginia, and Meredith College in North Carolina.

The requirements for guaranteed admission are:

- baccalaureate degree from an accredited college or university with a major in clinical laboratory sciences (medical technology), biology or chemistry,
- minimum overall undergraduate GPA of 3.25 and a minimum undergraduate science GPA of 3.0 on a 4.0 scale,
- minimum TOEFL of 570 for international students whose native language is not exclusively English and
- recommended, but not required, are two letters from employers or recent instructors addressing academic potential.

GRE is waived for admission decisions. The GRE must be taken within the first enrolled year, but the results are to be used for record keeping purposes only.

## Transfer credit

Students who have earned graduate credit before entering the Department of Clinical Laboratory Sciences' master's program may be permitted, at the discretion of the faculty, to transfer a maximum of six semester hours of credit toward the Master of Science degree. Transfer credit may be allowed when, in the judgment of the faculty, the applicants have satisfactorily completed course work equivalent to requirements of the graduate curriculum in this department.

## Program options

The department offers three tracks in the master's degree program in clinical laboratory sciences:

- [Accelerated Master's track](#)
- [Advanced Master's track](#)
- [Categorical Master's track](#)

Application forms and instructions for applying to all graduate programs are available on the [Graduate School](#) Web site.

## Accelerated master's track

### Admission requirements summary

#### Accelerated master's track

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.	Fall Spring	Jul 1 Nov 15	GRE

#### Special requirements:

Contact department for list of institutions with guaranteed admissions agreements

Complete supplemental [Essential Functions for Admission to Programs in Clinical Laboratory Sciences](#) form [pdf]

The accelerated master's track integrates graduate and undergraduate coursework and leads to the awarding of a B.S. and M.S. degree simultaneously. The student must complete a minimum of 112.5 undergraduate credit hours including 60 prerequisite credit hours (see admission requirements for the baccalaureate degree program in Clinical Laboratory Sciences in the [Undergraduate Bulletin](#) for a list of the specific courses) and 52.5 credit hours of professional coursework in clinical

laboratory sciences. A minimum cumulative GPA on CLLS courses of 2.7 and completion of the GRE are required for admission into the graduate portion of the program. The candidate must complete at least 40 additional hours of graduate-level course work. Upon completion of the curriculum students are eligible to take the national certification examinations for a CLS/MT generalist. Students pursuing the Accelerated Master's track must initially qualify for admission to the Bachelor of Science in Clinical Laboratory Sciences program. Application materials may be obtained by writing to the Office of Undergraduate Admissions, Virginia Commonwealth University, P.O. Box 980632, Richmond, VA 23298-0632, or the Department of Clinical Laboratory Sciences, Virginia Commonwealth University, P.O. Box 980583, Richmond, VA 23298-0583, or from the Web at <http://www.sahp.vcu.edu/cls>.

### Curriculum for the accelerated master's track

	credits
<b>Prerequisite requirement</b>	
60 hours of course work prior to entrance into the Bachelor of Science program in clinical laboratory sciences (refer to the <a href="#">VCU Undergraduate Bulletin</a> for details of the required courses)	60
<b>Professional studies requirement — Undergraduate</b>	
CLLS 301-302 Hematology	7.5
CLLS 304 Urine and Body Fluid Analysis	2.0
CLLS 306 Immunohematology	4.5
CLLS 307 Introduction to Pathogenic Microbiology	3.0
CLLS 308 Pathogenic Bacteriology	5.0
CLLS 310 Clinical Immunology	4.5
CLLS 311-312 Clinical Chemistry and Instrumentation I, II	10.0
CLLS 337 Clinical Education	1.0
CLLS 483 Biochemistry Practicum	3.0
CLLS 485 Hematology Practicum	3.0
CLLS 493 Clinical Microbiology Practicum	3.0
CLLS 494 Miscellaneous Clinical Practicum	3.0
CLLS 496 Blood Bank Practicum	3.0
	<b>52.5</b>
<b>Professional studies requirement – Graduate</b>	
CLLS 580 Education/Management	3.0
BIOS 543 Statistical Methods I	3.0
ACCT 507 Fundamentals of Accounting	3.0
Education/Management/Business Electives	3.0
CLLS 600 Advanced Concepts in Clinical Laboratory Sciences	3.0
Discipline Specific Sciences	6.0
CLLS 690 Clinical Laboratory Sciences Seminar	1.0
OCCT 710 Research Process in Occupational Therapy	3.0
CLLS 790 Research in Clinical Laboratory Sciences	3.0
Electives	12.0
	<b>40</b>

Full-time candidates require a minimum of five academic years to complete the program.

## Advanced master's track

### Admission requirements summary

#### Advanced master's track

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.	Fall Spring	Jul 1 Nov 15	GRE

**Special requirements:**

Contact department for list of institutions with guaranteed admissions agreements

Complete supplemental [Essential Functions for Admission to Programs in Clinical Laboratory Sciences](#) form [pdf]

Students holding a baccalaureate degree in clinical laboratory sciences/medical technology and generalist certification by the National Credentialing Agency for Laboratory Personnel Inc. or the Board of Registry of the American Society for Clinical Pathology are eligible for the advanced master's track. Candidates may specialize and complete a project or thesis in clinical chemistry, hematology, microbiology, immunohematology, molecular diagnostics or immunology. In addition to the basic science requirement, each student will choose an area of secondary emphasis in biomedical research, education, management or business.

**Curriculum for Advanced master's track**

Students in the advanced master's track are required to complete a minimum of 34 semester hours to include:

Discipline-specific science	15-18
Seminar	3
	(4 recommended)
Education, management or business	3
Computer applications or statistics	3
Research methodology	3
Research	4-6

Specific courses will depend on the individual candidate's choice of specialty. The basic science requirement may be distributed among approved courses listed in this bulletin.

Students with a secondary emphasis in education, management or business may elect to focus on courses in those areas in lieu of the discipline-specific course work. No more than 14 credit hours in the area of secondary emphasis may be applied toward the total minimum requirement.

A research study in the form of a thesis or project is required. Students selecting the thesis option complete a minimum of 15 semester hours of discipline-specific sciences and six hours of research; students selecting the project option complete 18 semester hours of discipline-specific sciences and four hours of research.

Full-time candidates require a minimum of two academic years to complete the program. There are no full-time residence requirements. Part-time students must complete all work requirements within five years. An interruption in registration in excess of one semester requires prior approval of the department.

**Categorical master's track****Admission requirements summary****Categorical master's track**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.	Fall Spring	Jul 1 Nov 15	GRE

**Special requirements:**

Contact department for list of institutions with guaranteed admissions agreements

Complete supplemental [Essential Functions for Admission to Programs in Clinical Laboratory Sciences](#) form [pdf]

The categorical master's track is designed for students with a baccalaureate degree in biology or chemistry. This track provides specialized study, including a clinical practicum, in one of the following areas: clinical chemistry, hematology, microbiology or immunohematology. A project or thesis is required. Upon completion of the curriculum, students are eligible to take a national certification examination in the area in which they performed their concentrated study.

**Curriculum for Categorical master's tracks**

Students in the categorical master's track are required to complete a minimum of 34 semester hours to include:

Discipline-specific science	15-18
Seminar	3
	(4 recommended)
Education, management or business	3
Computer applications or statistics	3
Research methodology	3
Research	4-6

Specific courses will depend on the individual candidate's choice of specialty. The basic science requirement may be distributed among approved courses listed in this bulletin.

Categorical master's candidates are required to complete a six-week clinical practicum in their specialty area.

A research study in the form of a thesis or project is required. Students selecting the thesis option complete a minimum of 15 semester hours of discipline-specific sciences and six hours of research; students selecting the project option complete 18 semester hours of discipline-specific sciences and four hours of research.

Full-time candidates require a minimum of two academic years to complete the program. There are no full-time residence requirements. Part-time students must complete all work requirements within five years. An interruption in registration in excess of one semester requires prior approval of the department.

**Department of Gerontology**

The mission of the Department of Gerontology is to improve elder care through education.

The basic philosophy of the department is to improve the overall well-being of elderly persons through the development of educational programs that are responsive to the changing psychological, physical, social and political needs of our elderly population. Research, community service and continuing education in gerontology and geriatrics are integral parts of this educational effort.

**Administration****E. Ayn Welleford**

Professor and Interim Department Chair

**History**

The Department of Gerontology was founded in 1976. The Master of

Science in Gerontology, as well as a postgraduate Certificate in Aging Studies, is offered. The Department of Gerontology became a part of the School of Allied Health Professions in January 1985. As part of the department, the Geriatric Education Center was established Oct. 1, 1985. This center is a multidisciplinary effort involving cooperation of all the health-related professional schools and the College of Humanities and Sciences; the major focus is to promote education in geriatrics and gerontological health care.

## Objectives

The purpose of this program is threefold: (1) to train qualified professionals to work in administrative, planning, service delivery and instructional and staff development positions in programs and services for the elderly at the national, state and local levels, (2) to provide an opportunity for those studying in other disciplines, and whose work will encompass service to the aged, to integrate their own training with a comprehensive knowledge and understanding of the aging process and (3) to stimulate the design and execution of gerontological research across the multiple disciplines.

## Facilities

Offices of the Department of Gerontology are located in the Randolph Minor Annex, 301 College St. The Virginia Geriatric Education Center is housed in West Hospital, 1200 E. Broad St., 4th Floor, West Wing.

## Virginia Center on Aging

The Virginia Center on Aging, established at VCU by the Virginia General Assembly in 1978, is a statewide resource for aging-related research, education, service, training and technical assistance. It serves as a focal point for the collection, assessment and maintenance of data on elders in the commonwealth; designs and tests innovative demonstration projects in education and service delivery; and assists public and private organizations in meeting the needs of older citizens.

The Virginia Center on Aging and the Department of Gerontology maintain the Information Resources Center, a broad collection of print and audiovisual materials on aging that is available on loan. Short reports and training manuals may be obtained at cost. The Virginia Center on Aging also administers the Alzheimer's and Related Diseases Research Award Fund that provides seed grants of \$25,000 each to researchers in Virginia in order to investigate biomedical, psychosocial, clinical, public policy and other aspects of dementing illness.

The Virginia Center on Aging regularly partners with other units of VCU in developing, conducting and evaluating research and training projects related to aging, disabilities, lifelong learning and health problems.

## Honors and awards

### A. D. Williams Award

An annual award is made to a student who demonstrates by virtue of high scholastic attainment and professional competence unusual promise and ability in the field of gerontology.

### Gerontology student of the year

Each year the faculty chooses a graduating student who has exhibited outstanding scholastic achievement and demonstrated service in gerontology.

## Distinguished Alumni Award

Each year the departmental faculty chooses an alumna/alumnus who best exemplifies the standards of the profession.

## Iris A. Parham Award and Scholarship

The Iris A. Parham Scholarship was created by alumni in honor of Dr. Iris A. Parham and the Department of Gerontology's 25th anniversary. This award is given to a candidate who has demonstrated distinguished academic performance, outstanding achievement in and dedication to the field of gerontology, and has overcome obstacles or met significant challenges to pursue a career in aging studies.

## Programs

Seven courses of study are offered:

- a Master of Science in Gerontology degree with a concentration in one of the following six tracks: education, health care organization and planning, psychogeriatrics, public administration, social services, or research
- a Certificate in Aging Studies program to meet the needs of persons working with the elderly, but who have no academic training in gerontology
- a combination of the Certificate in Aging Studies program and the Doctor of Physical Therapy degree, offered jointly with the Department of Physical Therapy
- a combination of the Certificate in Aging Studies program and a Master of Social Work degree, offered jointly with the School of Social Work
- a combination of the Certificate in Aging Studies with the Doctor of Pharmacy degree, offered with the School of Pharmacy
- a combination of the Certificate in Aging Studies and a Master of Science in Rehabilitation Counseling, offered jointly with the Department of Rehabilitation Counseling
- a combination of the Certificate in Aging Studies and either the Post-professional Master of Science in Occupational Therapy (M.S.), the Master of Science in Occupational Therapy (M.S.O.T.) or the Post-professional Occupational Therapy Doctorate (O.T.D.)

## Aging Studies, Certificate in (Post-baccalaureate graduate certificate)

### Admission requirements summary

#### Aging Studies, Certificate in (Post-baccalaureate graduate certificate)

Degree:	Semester(s)	Deadline	Test
	of entry:	dates:	requirements:
Certificate	All semesters		

The Certificate in Aging Studies program is designed to meet the needs of those individuals who want graduate training in gerontology but who do not want to complete the full master's program. This program is

complementary to the Master of Science program. Certificate students who wish to enter the Master of Science program must make formal application and abide by the admission requirements outlined in this bulletin.

There are postbaccalaureate and post-master's certificate programs, as well as jointly presented specialty certificates: Aging Studies Program (emphasis in long-term care administration); M.S. in Occupational Therapy and Certificate in Aging Studies; M.S.W. and Certificate in Aging Studies; Certificate in Aging Studies with the Department of Rehabilitation Counseling; Certificate in Aging Studies with the School of Pharmacy. Courses for the certificate also are available in distance format. Contact the Department of Gerontology directly for information on the distance courses at (804) 828-1565.

## Admission requirements

The Certificate in Aging Studies Program is open to qualified students who have earned a baccalaureate degree from an accredited college or university or the equivalent.

## Curriculum

### General Certificate in Aging Studies Program

The certificate program of studies requires successful completion of 21 credit hours of work comprised of the following courses now offered in the gerontology graduate curriculum:

- The biology of aging, psychology of aging, social gerontology, and research methods form the basic core of the certificate program.
- Following the completion of these gerontology courses, students may choose two elective gerontology courses after consultation with their faculty advisers. Advisers counsel students as to the courses that would best suit their educational training needs. Students may choose from aging and human values; topical seminar; independent studies, problems, issues and trends in gerontology; recreation, leisure and aging; and other elective courses.
- In addition to the completion of these prescribed courses, each candidate for a Certificate of Aging Studies would be required to satisfactorily complete a project in gerontology on a subject approved by the faculty. This project may be a comprehensive literature review, a research project, or a training or demonstration project. Students would register for a three-credit course in independent studies (GRTY 692).

## Awarding of the certificate

Upon successful completion of the total program described here, as well as maintaining a 3.0 GPA, students are awarded a Certificate in Aging Studies.

### Combined Certificate in Aging Studies (Post-baccalaureate graduate certificate) and Doctor of Pharmacy (Pharm.D.)

The Department of Gerontology in cooperation with the School of Pharmacy provides an opportunity for students in the Doctor of Pharmacy program to complete the certificate. This 21-credit program is designed to integrate the required independent study project in gerontology into the Pharm.D. curriculum's clerkship assignment.

	credits
GRTY 601 Biological and Physiological Aging	3
GRTY 602 Psychology of Aging	3
GRTY 605 Social Gerontology	3
GRTY 606 Aging and Human Values or	3
GRTY 616 Geriatric Rehabilitation or	
GRTY 691 Geriatric Interdisciplinary Team Training	
GRTY 692 Independent Study in Gerontology	2
PHAR 670 Geriatric Pharmacotherapy	3
PHAR 745 Drug Literature Evaluation	4
	<hr/> 21

### Combined Certificate in Aging Studies (Postbaccalaureate graduate certificate) and Master of Science in Occupational Therapy (M.S.O.T.)

The departments of Occupational Therapy and Gerontology have developed a specialized version of the Certificate in Aging Studies program for students completing the Master of Science in Occupational Therapy. Students must meet admission requirements for the occupational therapy degree and the gerontology certificate program. The student is required to complete the following courses:

	credits
GRTY 601 Biological and Physiological Aging	3
GRTY 602 Psychology of Aging	3
GRTY 605 Social Gerontology	3
GRTY 606 Aging and Human Values, or	3
GRTY 616 Geriatric Rehabilitation, or	
OCCT 655 Older Adult Advanced Assistive Technology	
Application in Occupational Therapy, or	
GRTY 691 Geriatric Interdisciplinary Team Training	
OCCT 691 Special Topics	2
OCCT 709 Research Process and Statistical Analysis in	4
Occupational Therapy	
OCCT 729 Research Practicum in Occupational Therapy	3
	<hr/> 21

Contact the respective departments for additional curriculum information.

### Combined Certificate in Aging Studies (Postbaccalaureate graduate certificate) and Master of Science in Rehabilitation Counseling (M.S.)

The Department of Rehabilitation Counseling, in cooperation with the Department of Gerontology, provides its degree-seeking students with the opportunity to earn the Certificate in Aging Studies while concurrently completing the requirements for the Master of Science in Rehabilitation Counseling. Students must meet admission requirements for both the rehabilitation degree and the gerontology certificate program, and admission into one is independent of the other. Additional information, including the specific program of study for the counseling program, may be obtained in the Department of Rehabilitation Counseling. Information on the curriculum presented by the Department of Gerontology can be obtained by contacting the chair of the Department of Gerontology.

### Admission deadlines and requirements

Both full- and part-time students are valued and are welcome to apply. Applications are reviewed on an ongoing basis. To be considered, all pertinent materials must be received in the department by Aug. 1 (for fall),



Dec. 1 (for spring) or May 1 (for summer). Admission requirements include:

- an undergraduate GPA of 2.7 on a 4.0 scale; or 2.7 in the last 60 semester hour credits (Based upon transcripts provided to the Graduate School),
- three positive letters of reference from professors or employers (on reference forms provided by the Graduate School),
- satisfactory performance on either the GRE (804) 828-6916 or the MAT (804) 828-1193,
- a relevant and clear statement of goals for graduate study and career,
- statement of previous work or volunteer experience, and
- a personal interview with a faculty member may be required.

A complete set of application materials is available from the department office at (804) 828-1132.

#### Transfer credit

A maximum of 13 hours of graduate credit may be transferred from another VCU graduate program or outside institution if not applied previously to another degree. Transfer credits must carry a grade of "B" or higher from an accredited institution. Acceptance of transfer credit is made at the level of the department chair and dean of the School of Allied Health Professions. Transfer credits earned as a nondegree-seeking graduate student are limited to six semester hours of credit. Credits earned as deficiency hours or to demonstrate the ability to compete at the graduate level, though transferable, may not be applied to the 48-credit program of study.

#### Curriculum

In addition to the requirements for the Master of Science in Rehabilitation Counseling, the certificate program requires the completion of 15 credits in gerontology and six credits in rehabilitation counseling.

	credits
GRTY 601 Biological/Physiological Aging	3
GRTY 602 Psychology of Aging	3
GRTY 605 Social Gerontology	3
GRTY 615 Aging and Mental Disorders or GRTY 641 Psychological Assessment and Treatment	3
GRTY 692 Independent Study in Gerontology	3
RHAB 625 Research in Rehabilitation	3
RHAB 696 Supervised Clinical Practice in Rehabilitation Counseling	3
	<hr/> 21

### Combined Certificate in Aging Studies (Postbaccalaureate graduate certificate) and Post-professional Master of Science in Occupational Therapy (M.S.)

The departments of Occupational Therapy and Gerontology have developed a specialized version of the Certificate in Aging Studies program for students completing the post-professional Master of Science in Occupational Therapy. Students must meet admission requirements for the occupational therapy degree and the gerontology certificate program. The student is required to complete the following courses:

credits

GRTY 601 Biological and Physiological Aging	3
GRTY 602 Psychology of Aging	3
GRTY 605 Social Gerontology	3
GRTY 606 Aging and Human Values, or GRTY 616 Geriatric Rehabilitation, or OCCT 655 Older Adult Advanced Assistive Technology Application in Occupational Therapy, or GRTY 691 Geriatric Interdisciplinary Team Training	3
OCCT 710 Research Process in Occupational Therapy	3
OCCT 711 Research Process in Occupational Therapy: Qualitative Methods	3
OCCT 798 Thesis	3
	<hr/> 21

Contact the respective departments for additional curriculum information.

### Combined Master of Social Work (M.S.W.) and Certificate in Aging Studies (Post-baccalaureate graduate certificate)

#### Admission requirements summary

#### Combined Master of Social Work (M.S.W.) and Certificate in Aging Studies (Post-baccalaureate graduate certificate)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.W.	<b>Regular Standing</b> Full-time – Fall Part-time – Fall	Feb 1 Feb 1	
	<b>Advanced Standing</b> Summer only – Richmond campus	Dec 1	

#### Special requirements:

If applying for off-campus program for concentration year, indicate location in item 5 on application

See Social Work [Web site](#) for supplemental academic information form.

The School of Social Work in cooperation with the Department of Gerontology of the School of Allied Health Professions of VCU provides students with a unique educational opportunity in social work and gerontology. Master of Social Work students interested in work with the elderly or in gerontological programs may earn a Certificate in Aging Studies while completing the master's degree requirements.

Students must meet the admission requirements of the Master of Social Work program of the School of Social Work and of the Certificate in Aging Studies program in the Department of Gerontology, School of Allied Health Professions. Admission into one program does not guarantee admission into the other. In order to meet the requirements of the M.S.W. degree and the Certificate in Aging Studies, students complete a total of 65 graduate credits. All foundation and specialization courses of the Master of Social Work Program are completed, and core courses (nine credits) of the Certificate in Aging Studies Program are completed. Other requirements are met by (1) completion of M.S.W. research credits in which students undertake a project focused on aging, (2) completion of second-year field instruction practicum requirements (six credits) in a social work setting related to aging, (3) completion of an independent study course in gerontology, which integrates research and practicum courses.

Additional information may be obtained from either of the following offices:

**Department of Gerontology**  
**School of Allied Health Professions**  
[www.sahp.vcu.edu](http://www.sahp.vcu.edu)

Virginia Commonwealth University  
P.O. Box 980228  
Richmond, VA 23298-0228  
Attention: M.S.W.-Gerontology Certificate Adviser

#### School of Social Work

[www.vcu.edu/slwwweb](http://www.vcu.edu/slwwweb)

Virginia Commonwealth University

1001 W. Franklin St.

Richmond, VA 23284-2027

Attention: M.S.W.-Gerontology Certificate Adviser

	credits
GRTY 601 Biological and Physiological Aging	3
GRTY 602 Psychology of Aging	3
GRTY 605 Social Gerontology	3
GRTY 692 Independent Study in Gerontology	2
	6

SLWK 706 and 707 Research for Clinical Social Work Practice I and II or

SLWK 714 and 715 Research for Social Work Administration, Planning and Policy I and II

SLWK 793-794 Concentration Field Instruction or	6
SLWK 795 Concentration Block Field Instruction	

23

### Aging Studies, Certificate in (Post-master's certificate)

#### Admission requirements summary

##### Aging Studies, Certificate in (Post-master's certificate)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Certificate	All semesters		

The Certificate in Aging Studies program is designed to meet the needs of those individuals who want graduate training in gerontology but who do not want to complete the full master's program. This program is complementary to the Master of Science program. Certificate students who wish to enter the Master of Science program must make formal application and abide by the admission requirements outlined in this bulletin.

There are postbaccalaureate and post-master's certificate programs, as well as jointly presented specialty certificates: Aging Studies Program (emphasis in long-term care administration); M.S. in Occupational Therapy and Certificate in Aging Studies; M.S.W. and Certificate in Aging Studies; Certificate in Aging Studies with the Department of Rehabilitation Counseling; Certificate in Aging Studies with the School of Pharmacy. Courses for the certificate also are available in video format. Contact the Department of Gerontology directly for information on the telecourses at (804) 828-1565.

#### Admission requirements

The Certificate in Aging Studies Program is open to qualified students who have earned a master's or terminal degree from an accredited college or university or the equivalent.

#### Curriculum

#### General Certificate in Aging Studies Program

The certificate program of studies requires successful completion of 21 credit hours of work comprised of the following courses now offered in the gerontology graduate curriculum:

- The biology of aging, psychology of aging, social gerontology, and research methods form the basic core of the certificate program.
- Following the completion of these gerontology courses, students may choose two elective gerontology courses after consultation with their faculty advisers. Advisers counsel students as to the courses that would best suit their educational training needs. Students may choose from aging and human values; topical seminar; independent studies, problems, issues and trends in gerontology; recreation, leisure and aging; and other elective courses.
- In addition to the completion of these prescribed courses, each candidate for a Certificate of Aging Studies would be required to satisfactorily complete a project in gerontology on a subject approved by the faculty. This project may be a comprehensive literature review, a research project, or a training or demonstration project. Students would register for a three-credit course in independent studies (GRTY 692).
- For students who already have an M.S. or Ph.D., two three-credit independent study courses are required (GRTY 792).

#### Certificate in Aging Studies program (emphasis in long-term care administration)

Students wishing to pursue the Certificate in Aging Studies program (emphasis in long-term care administration) must complete a total of 22 credit hours. In addition to the three basic core courses of the certificate program (nine credits), students complete a three-credit field study and 10 credits of health administration courses, which focus on long-term care administration, hospital and medical law, and financial management in health organizations.

#### Awarding of the certificate

Upon successful completion of the total program described here, as well as maintaining a 3.0 GPA, students are awarded a Certificate in Aging Studies.

### Gerontology, Master of Science (M.S.)

The gerontology curriculum is a multidisciplinary program established in 1976 which offers the Master of Science degree. The program utilizes professional assistance from departments on both campuses.

There are six concentration areas in gerontology:

- Education track
- Health care organization and planning track
- Psychogeriatrics track
- Public administration track
- Social services track

- Research track

The 42-hour degree program includes 24 hours of courses in gerontology, 12 hours in the chosen concentration area and six credits for thesis (or a thesis option).

## Admission policy

The program is open to qualified students who have earned a baccalaureate degree from an accredited college or university or the equivalent, maintained a minimum GPA of 3.0 and have satisfactory scores on the GRE or MAT. A successful work experience may strengthen the admission credentials of applicants with marginal records.

Because of the diversity of undergraduate majors, candidates for the gerontology program must present evidence of successful completion of undergraduate courses in the following areas:

- biological science – minimum of six semester hours.
- psychology – minimum of three semester hours.
- sociology, anthropology or social work – minimum of three semester hours.
- statistics, research methods or equivalent – minimum of three semester hours. (Topics covered in this undergraduate course should be equivalent to those outlined for STAT 214 in the Undergraduate Bulletin.)

Candidates for admission who do not meet these requirements will be expected to complete the required undergraduate course work or to pass challenge examinations by the end of the first year. See [Graduate Studies at VCU](#) in this bulletin for admission requirements and procedures.

## Transfer and waiver of course credits

Students who have completed graduate work in other graduate departments, whether at VCU or another university, may transfer no more than 12 credit hours of work at “B” level if such work is considered relevant by the departmental admissions committee. Also, a maximum of six hours of graduate credits accrued at a “B” level as a “special student” at VCU may be applied to the Master of Science degree or three hours to the certificate program, with approval of the departmental Admissions Committee.

Transfer credits for graduate work at other institutions will be evaluated at the time of full admission to the program. To have credits transferred, students are required to prepare a synopsis of each graduate course that is to be transferred for review by the faculty. Each synopsis will include the name of texts used in the course and a specific listing of topics and material covered. Students may also apply for waivers of specific requirements in a similar manner.

## Master’s thesis

- The master’s thesis is an option for students entering with a bachelor’s degree. Students may elect either a six-credit thesis or six hours of graduate course work to meet the 42-hour requirement.
- Each student shall arrange for a member of the gerontology program to serve as the chair of the thesis committee. With the chair’s approval, at least two additional committee members will be selected. At least two of the members must be from the Department of Gerontology.

The thesis chair will monitor and advise during thesis development. The

student will take the major role in actual data collection. The thesis should be a publishable piece of research that makes some contribution to the field of gerontology.

## Written comprehensive examination

A written comprehensive examination is required after completion of all required course work and before the student begins a practicum (field experience).

The comprehensive examination will be scheduled three times a year (early in the fall and spring semesters and once in the summer).

## Practicum

Field experiences, with the supervision arranged by the director and program faculty, constitute an additional requirement. These experiences are intended to develop practical understanding, skills, attitudes and values essential for working with the aged in a variety of settings.

The practicum will involve a 600-hour placement (one semester full time or two semesters half time). Each student must submit a practicum proposal (prepared with the assistance of the adviser) that must be approved prior to beginning the practicum.

For those already employed in the field of gerontology, an approved special project may be substituted for the field experience placement. Those students who are working full time in a job outside the field of aging also may submit a proposal for review that may allow for their continued employment, while fulfilling this important requirement. All students must register for GRTY 607 Field Study in Gerontology.

## Education track

### Admission requirements summary

#### Education track

Degree:	Semester(s)	Deadline	Test
	of entry:	dates:	requirements:
M.S.	All semesters		GRE or MAT

This area of concentration is designed for students interested in teaching or training careers in gerontology. Students electing this track will be prepared to provide instruction to university or community college students, the lay public, professional service providers, and older people.

## Health care organization and planning track

### Admission requirements summary

#### Health care organization and planning track

Degree:	Semester(s)	Deadline	Test
	of entry:	dates:	requirements:
M.S.	All semesters		GRE or MAT

(In conjunction with the Department of Health Administration.) Upon completing this track, students will have a foundation of knowledge in health care organization, health planning, health policy and a macro perspective on the financing of health care. In addition, students will have developed skills in policy analysis and the use of economic tools. Finally, students will broaden their understanding of the political, legal and ethical issues involved in health care organization and planning.

## Psychogeriatrics track

### Admission requirements summary

#### Psychogeriatrics track

Degree: Semester(s) Deadline Test  
of entry: dates: requirements:  
M.S. All semesters GRE or MAT

This area of concentration, developed jointly with the Department of Psychology, is designed for students interested in working with those older adults and their families who are experiencing psychological difficulty. Students electing this track will be prepared to provide assistance directly to the elderly and their families as well as to consult and train professionals and paraprofessionals to provide more effective mental health services. Training is provided through a combination of specialized didactic instruction and structured field experience in providing direct services, consultation and education.

## Public administration track

### Admission requirements summary

#### Public administration track

Degree: Semester(s) Deadline Test  
of entry: dates: requirements:  
M.S. All semesters GRE or MAT

Students who elect to pursue courses in the public administration track, developed jointly with the L. Douglas Wilder School of Government and Public Affairs, will, after completion of course work, be able to plan, organize, report, control and budget for public programs in aging. Grant writing and program evaluation skills will be developed as well. Students choosing the public administration track may wish to complete the Certificate in Public Management program (CPM).

## Research track

### Admission requirements summary

#### Research track

Degree: Semester(s) Deadline Test  
of entry: dates: requirements:  
M.S. All semesters GRE or MAT

This track is designed for students who would ultimately like to pursue a Doctor of Philosophy in the social or behavioral sciences or a Doctor of Philosophy in Health Related Sciences (School of Allied Health Professions). (All students who elect the research track must complete a thesis.) Students will obtain a strong background in experimental psychology research design and methodology and a broad background in life-span developmental theory.

## Social services track

### Admission requirements summary

#### Social services track

Degree: Semester(s) Deadline Test  
of entry: dates: requirements:  
M.S. All semesters GRE or MAT

This track concentrates on developing specialized knowledge and skills in the provision of services to the elderly, basic understanding and skills in at least one method of social work practice, commitment and ability to participate in the development of strategies and policies relevant to amelioration of social problems of the elderly, and the ability to integrate and use in practice knowledge of individual behavior and social structure with particular reference to the needs of the elderly.

## Department of Health Administration

Education in health administration at the university began in 1949 with the establishment of a graduate curriculum in hospital administration. Early graduates received a certificate; the master's degree was awarded beginning in 1955.

These early efforts grew and developed into the Department of Health Administration, which was established in 1972. The department now includes three major programs: (1) Master of Health Administration, (2) Doctor of Philosophy in Health Services Organization and Research, and (3) Professional Master of Science in Health Administration – Online. The department also cooperates with the T. C. Williams School of Law of the University of Richmond and Washington and Lee University in offering dual degree programs in health administration and law. In 2001, the dual degree M.D./M.H.A. program was established with the VCU School of Medicine. Both master's programs are fully accredited by the Commission on Accreditation of Healthcare Management Education (CAHME). In addition to these educational programs, the Department of Health Administration has a major research program and is involved in a wide range of public service activities, including continuing studies for health services administrators and other health professionals.

The overall purpose of the Department of Health Administration is to provide educational programs and services related to the organization and administration of health services. In achieving that purpose, the department's principal functions are to provide high-quality education leading to careers in the administration of health care institutions, agencies and systems and to provide advanced training and education for persons who will teach, plan, evaluate and investigate health care policies and medical care systems. Corollary functions are to provide assistance and other services for community organizations and to conduct health services and health policy research.

### Administration

#### Stephen S. Mick

Arthur Graham Glasgow Professor and Department Chair

#### Kenneth R. White

Professor and Director, Master of Health Administration Program

#### Dolores G. Clement

Professor and Director, Professional Master of Science in Health Administration Program

#### Michael J. McCue

Professor and Director, Health Services Organization and Research Doctoral Program

### Facilities

The department is located in the William Grant House, formerly the Sheltering Arms Hospital, at 1008 E. Clay St., Richmond, VA. The chair's office and the professional graduate programs offices are located on the

second floor. The doctor of philosophy program office and the Williamson Institute are located on the third floor of the building.

MCV Hospitals, one of the largest teaching hospitals in the nation, and other clinical facilities of the VCU Medical Center are readily accessible to the department's students and faculty. In addition, the department has clinical affiliations and close working relationships with a large number of health care organizations and agencies in Virginia and throughout the United States. The organizations and agencies are used extensively as clinical facilities in the department's educational programs.

## **Endowed awards, lectureships and professorships**

### **Earl Bullard Scholarship Fund**

The Bullard Scholarship Fund was established through the generosity of Charles H. Keaton (M.S.H.A., '90) and many other graduates of the M.S.H.A. Program. Scholarships generated by this fund are used to support students in the M.S.H.A. Program.

### **Robert Hudgens Memorial Award**

The Robert Hudgens Memorial Award was established and endowed by the department's alumni association in cooperation with the American College of Healthcare Executives (ACHE). The Hudgens Award is presented annually to the person selected by a special ACHE committee as the most outstanding young health care executive in the United States. It is a major, nationally recognized award presented at the annual ACHE Congress on Administration.

### **Arthur Graham Glasgow Professorship of Hospital Administration**

The endowed Arthur Graham Glasgow Professorship of Hospital Administration was established in 1957 in honor of Glasgow, who had demonstrated a vital interest in hospitals and hospital administration.

### **Herman L. Mullins Award**

The Herman L. Mullins Award is presented annually for the most outstanding management study completed by a graduate student in health services administration. This award was established by the Master of Health Administration Class of 1976 through the Health Administration Alumni Association as a lasting recognition for the contributions of Herman L. "Moon" Mullins as a teacher, adviser and friend of the student.

### **Thomas C. Barker Preceptor Award**

The Thomas C. Barker Preceptor Award was established by the Master of Health Administration Class of 1996 in honor of the first dean of the School of Allied Health Professions, who was affiliated with the Department of Health Administration. Barker had served as chair of the Department of Health Administration and Master of Health Administration program director prior to becoming dean. The graduating class nominates and elects the preceptor who has demonstrated outstanding mentorship during the year of residency. Dedication to the Master of Health Administration program should be a consideration in the nomination.

### **Stuart D. Ogren Scholarship Fund**

The Stuart D. Ogren Scholarship Fund was established by institutional members of the Virginia Hospital and Health Care Association, and Ogren's friends and colleagues in 1990. The fund honors Ogren, a former president of the Virginia Hospital Association. During his distinguished career, Ogren made significant contributions to the effective provision of medical care services in the commonwealth and the formulation of health care policy in the commonwealth and the nation. These scholarships, supported through an endowment, are available to students who have been admitted to the department's graduate program in health services administration (M.H.A. degree). Funds are employed to attract exceptionally well-qualified students (as defined by previous academic performance and work experience). The awardees are recognized each year at the Virginia Hospital and Health Care Association's annual meeting.

### **HCA Scholarship for Emerging Healthcare Leaders**

HCA Healthcare established the HCA Scholarship for Emerging Healthcare Leaders in order to formalize a partnership with the Department of Health Administration in recruiting emerging health care leaders. These scholarships, supported through an endowment, are available to students who have been admitted to the M.H.A. program. Funds are employed to attract exceptionally well-qualified students (as defined by previous academic performance, work experience and leadership roles).

### **Jerry L. Norville Award**

The Jerry L. Norville Award is presented annually to the faculty member who, through example, demonstrates exceptional dedication and genuine concern for the welfare of students in the Master of Health Administration program. This award was established by the Master of Health Administration Class of 1989 in honor of Professor Jerry L. Norville who served on the faculty for 20 years and, during that time, served as director of the Master of Health Administration program and as department chair.

### **David G. Williamson Jr. Institute for Health Studies**

Officially initiated in 1987, the David G. Williamson Jr. Institute for Health Studies was named in memory of Mr. David G. Williamson Jr., formerly the vice chair of the Hospital Corporation of America and one of the department's leading alumni. Williamson played a major role in making it possible for the institute to be established. The institute serves as a bridge between the department and administrative and clinical leaders in health care by sponsoring instructional, research, and outreach programs focused on the organization and financing of health services. Such programs are designed to help resolve the often conflicting requirement that health care organizations be simultaneously cost effective, innovative and responsible for serving society's needs.

### **Dolores G. Clement Award for Outstanding Advising**

Dolores G. Clement Award for Outstanding Advising was established by the Master of Health Administration Class of 1998 in honor of Dolores G. Clement, Dr.P.H. The award recognizes a faculty member for counsel and support outside of the classroom. More specifically, the award is in recognition of faculty who have demonstrated extraordinary dedication to the academic, professional and personal growth of students. This award has been established to honor Clement for her years of devotion to the Department of Health Administration.

### **Paul A. Gross Distinguished Leadership Speaker Series**

The Paul A. Gross Distinguished Leadership Speaker Series is a program to bring to Virginia Commonwealth University the nation's leading scholars and health care executives to discuss topics on the cutting edge of research, scholarship and management expertise in the U.S. health care system. Its overarching goal is to increase the awareness of VCU students, faculty and alumni about current issues in the administrative world of the health care system.

### Carl Fischer Fund

The friends and associates of Carl Fischer, former chief executive officer of the Medical College of Virginia Hospitals, established this endowment to honor the excellent leadership Fischer provided to the hospital. This fund supports students with an interest in health care administration.

### Department of Health Administration Award in Managerial Ethics

Established through a gift from anonymous donors, this award is conferred annually to a professional student in the Department of Health Administration to recognize his or her inquiry into the ethical challenges facing those who manage health care organizations. The intent of this award is to foster the development of a sense of duty to humanity in health care managers, as exhibited by the morality needed in the administration of the health care enterprise in working with and for people.

### Department of Health Administration Alumni/ae Scholarship Fund

Through the generous donations of departmental alumni and alumnae, this fund is available for scholarship support to attract and maintain professional students who exemplify the highest standards of academic performance and leadership capability.

### Ham Flannagan Scholarship Fund

This fund was founded through the generosity of the friends of Paul F. "Ham" Flannagan, M.H.A. 1954, a long-time supporter of the Department of Health Administration and mentor to literally dozens of departmental graduates. The fund's objective is to support students making a firm commitment to excellence in health care administration.

### James Fleetwood Memorial Scholarship Fund

The Fleetwood Scholarship Fund is a memorial to James M. Fleetwood Jr., an honorary alumnus, preceptor and long-time friend of the Department of Health Administration. The fund's purpose is to honor his memory with scholarships to support M.H.A. students needing financial aid.

### Hyneman-Mick Endowment Fund

This endowment was established to promote excellence in scholarship by a doctoral student or students enrolled in the Ph.D. Program in Health Services Organization and Research in the Department of Health Administration. The goal is to create opportunities for doctoral students to advance their education and research capabilities.

### James W. Begun Award for Excellence in Doctoral Studies

To commemorate the 50th anniversary of the founding of the Department of Health Administration in 1999, the doctoral alumni/ae established the James W. Begun Award for Excellence in Doctoral Studies. Once the final doctoral dissertation has been defended, faculty members may nominate doctoral students for this award. Selection criteria include: dissertation quality, advancement of organizational theory and health service research, and the applicability of the research findings.

## Health Administration, Master of Science in (M.S.H.A.)

### Admission requirements summary

#### Health Administration, Master of Science in (M.S.H.A.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.H.A.	Fall	Mar 15	GRE or GMAT

The professional program is a 22-month full-time and 31-month part-time distance-learning course of study leading to the award of a Master of Science in Health Administration. It can be completed while working full time, because time away from work and home is minimized with six one-week on-campus periods over the 22-month period. The program is designed specifically for self-motivated, mature and experienced professionals who are seeking advanced preparation in management. Part-time options also are available.

The program is designed to meet the distinctive professional development needs of:

- clinicians,
- physicians,
- mid-level managers,
- executive-level managers and
- functional specialists.

Applicants to the M.S.H.A. program should have a minimum of five years of professional experience in addition to the academic requirements detailed in this bulletin. The 43-credit-hour curriculum emphasizes leadership in career progression as well as strategic and operational management of health care organizations.

The professional M.S.H.A. program-online has been continuously accredited and, in 2002, was awarded a seven-year accreditation extension.

### Admission requirements

Application procedures and admission requirements for the M.S.H.A. program are different than other courses of study offered by the university, so interested individuals should contact the department. The material can be obtained by writing Professional M.S.H.A. Program – Online, Virginia Commonwealth University, P.O. Box 980203, Richmond, VA 23298-0203, by calling (804) 828-7799 or from the [department Web site](#). Applications are accepted beginning in September for admission to the program in July of the following year. The application deadline is March 15.

The M.S.H.A. program admits individuals with diverse educational, work and life experiences who have the demonstrated capacity to pursue a rigorous course of professional graduate study.



To be considered for admission, applicants must, at a minimum:

- possess a baccalaureate degree from an institution of higher learning recognized by VCU and have a 2.75 GPA for all undergraduate work completed,
- have five years of professional health care work experience,
- submit scores on a standardized aptitude test for graduate studies (GRE or GMAT),
- submit a resume and personal statement and
- forward all required application and supporting materials to the Graduate School.

#### Previous educational experience

Applicants with less than a 2.75 undergraduate GPA who have exceptional professional experience will be considered for admission on provisional status. Provisional status will be removed after satisfactory completion of the first semester of the program. If an applicant has completed any graduate studies (whether or not a degree was awarded), performance in such course work will be considered in the admission decision.

#### Professional work experience

Applicants are expected to have at least five years of professional health care work experience as documented in a professional resume. The specific experience profile deemed appropriate for admission to the professional program depends upon one's particular profession or occupation. The resume is a very important element of the application materials. Applicants are encouraged to prepare the resume in such a way that it accurately and completely describes their accomplishments.

#### Graduate studies aptitude tests

VCU requires that all applicants for graduate study submit standardized aptitude test scores. The professional program will accept scores on either the GMAT or the GRE. Applicants who have taken the GMAT or GRE in the last five years may submit previous scores. Those applicants holding certain graduate or professional doctoral degrees (for example, M.D., D.D.S., J.D., Pharm.D., Ph.D.) may have GMAT or GRE requirements waived upon petition to the graduate dean. Applicants should make arrangements to take the examination of their choice at the earliest possible date.

#### Prerequisites

No specific previous course work is required for application to the program. Upon formal acceptance, students will be provided independent-study modules in three areas: microeconomics, accounting and statistics. These modules include books, articles, programmed instruction handbooks and computer-aided instructional material. Completing these independent-study modules precludes the need for taking prerequisite course work prior to instruction. Applicants having acceptable previous course work in accounting, microeconomics and/or statistics will not be required to complete these independent-study modules. Generally, these courses must be completed within five years of starting the program.

## Curriculum

Students are required to complete a total of 43 semester hours (including

transfer credit, if any) to qualify for the Master of Science in Health Administration degree. The curriculum consists of 16 courses listed below that must be completed by all degree candidates. The sequence of courses is as follows:

<b>First semester (Fall)</b>	credits
HADE 602 Health Systems Organization, Financing and Performance	3
HADE 624 Health Economics	3
HADE 690 Leadership and Health Care Organizations	3
<b>Second semester (Spring)</b>	
HADE 606 Health Care Managerial Accounting	3
HADE 610 Health Care Management Decision Support Systems	3
HADE 646 Organizational Behavior and Design in Health Care Management	3
HADE 631 Managed Care	3
HADE 613 Employment and Labor Law for Health Care Organizations	1
<b>Third semester (Fall)</b>	
HADE 607 Financial Management in Health Care Organizations	3
HADE 611 Health Care Organization and Management Law	3
HADE 612 Health Information Systems and Performance	3
HADE 615 Managerial Epidemiology	2
<b>Fourth semester (Spring)</b>	
HADE 614 Health Care Marketing	3
HADE 648 Health Care Strategic Management	3
Elective	3
HADE 650 Human Resource and Career Planning in Health Care Organizations	1

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43

The program's courses are designed to meet the distinctive needs of the experienced health care professional. Courses develop business skills for the unique health care environment so that students are prepared to meet the challenges of the health care marketplace. Classes draw upon the knowledge of the faculty and the diverse group of experienced professionals enrolled.

Each semester is composed both of on-campus and off-campus sessions. During the six one-week on-campus sessions, students attend professional program classes on the MCV Campus. During the off-campus session of each semester, students continue studies at their home or work site, employing a carefully planned array of distance-learning technologies.

## On-campus study

During the 22-month curriculum, students spend six one-week sessions on the MCV Campus. On-campus sessions are held during July/August, December and May. Dates for on-campus sessions for the current academic year are on the department Web site.

During on-campus sessions, students attend lectures, participate in seminars, and use the department's computer facilities and the VCU library. Ample opportunity is provided to interact with other colleagues, faculty and visiting scholars and practitioners. Courses meet during the day and may, on occasion, extend to evenings. Most evenings are reserved for study, group project work, informal interaction, relaxation and planned social events.

All courses are designed carefully to facilitate effective and efficient learning. Detailed outlines of lectures, handouts and comprehensive learning/study guides are provided for each course.

While in residence at the university, students stay in conveniently located hotels. Meals can be obtained for reasonable prices in the hotel or at a wide variety of restaurants in the immediate area. Students are encouraged to take advantage of the university's recreational facilities and the cultural and entertainment opportunities of Richmond and the



surrounding area.

## Off-campus study

During the off-campus session, students continue course work at their places of residence and/or employment. Full-time students are expected to devote 15 to 20 hours per week to study during the off-campus period of each semester. They employ a variety of distance learning technologies in their studies.

## Internet-based courses

The Department of Health Administration was a leader in developing online course software. Each course has its own electronic classroom. Faculty members distribute announcements and assignments, and conduct seminars and forums. Students can chat online, take practice quizzes and listen to recorded messages from faculty. Use of system capabilities varies by course.

The Web site and the Web-based technology are designed with the computer novice in mind. Students are trained to use the software and can receive support from our computer instructor as well as faculty.

## Equipment requirements

All those admitted to the M.S.H.A. program must have access to a multimedia personal computer. Specific hardware and software requirements are available from the department. In addition, students must be able to access the Internet from their personal computer. Access is usually obtained through a local Internet service provider by purchasing an Internet subscription.

Program faculty members strongly recommend having access to a personal computer at home, not just at the office.

## Academic policies and regulations

Academic policies and regulations are set forth in separate documents published by the Department of Health Administration. These documents are reviewed during orientation sessions. The university-wide policies and regulations are available online. They are reviewed during orientation sessions.

## Financial considerations

Interested students should contact the department for current tuition and fee information. In addition to tuition and fees, students will need to budget for the following expenses:

- computer equipment and online connections
- text books and reading packets
- travel, meals, lodging and personal expenses associated with attending the on-campus sessions in Richmond

Applicants are encouraged to consult a tax adviser regarding the rules and procedures governing educational deductions for income taxes.

If accepted to the professional program, students will be required to forward a nonrefundable payment of \$500 to hold a place in the class. This payment is applicable to first semester tuition and fees. Full payment for tuition and fees is due approximately 30 days prior to the beginning of each semester.

## Health Services Administration, Master of Health Administration (M.H.A.)

### Admission requirements summary

#### Health Services Administration, Master of Health Administration (M.H.A.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.H.A.	Fall	Mar 1	GRE or GMAT

#### Special requirements:

Refer to the Web for recent changes in admissions policies, including preferred score of 5.0 on GRE analytical writing section, minimum computer-based TOEFL score of 250 and minimum 3.0 GPA <http://www.had.vcu.edu/mha>

The graduate program in health services administration is designed to prepare persons for administrative roles ultimately leading to top-level executive positions in complex health services organizations. The curriculum emphasizes strategic and operational management, thus orienting students toward the broad spectrum of managerial problems and functions likely to be encountered by health services organizations.

The program's educational objectives and content are based upon the premise that a large number of students who select this curriculum aspire to become senior executives of health care organizations at some point in their careers. The graduate program in health services administration is designed for full-time students.

The graduate program was accredited initially in 1968, one of the first programs in the United States to achieve that status. It has continuously maintained its national accreditation status, and in 2002 the program was awarded a seven-year accreditation.

### Admission requirements – M.H.A. and dual degree programs

Applications are encouraged from persons who have earned undergraduate or graduate degrees in any discipline or field of study. However, to be eligible for admission to the graduate program, completed course work must include basic preparation in economics, financial accounting and business statistics. In addition, a working knowledge of college-level algebra is necessary preparation for the graduate program's courses.

The prerequisite requirements may be met by the following specifications:

- completing specified prerequisite courses with a grade of "C" or better within the past five years at any accredited college or university or
- providing other evidence of competency acceptable to the admissions committee.

Any or all of the three prerequisite courses may be taken in VCU's School of Business during the summer session immediately before the fall semester when the student enrolls in the graduate program in health administration. The courses provide an excellent opportunity for students without a strong background in business to fulfill the course work requirements for entrance into the graduate program.

To be considered for admission into the graduate program in full status, the applicant must meet the following minimum qualifications: (1) present evidence of personal achievement, scholarship, intellectual ability and professional promise, (2) hold a baccalaureate or graduate degree from a college or university that is fully accredited by the Association of American Universities or by a regional accrediting agency, (3) have an overall GPA

of 3.0 or higher on a 4.0 scale in undergraduate work or provide evidence of high achievement in a substantial amount of graduate-level course work, (4) attain a satisfactory score (at least 50th percentile in each category) on the Graduate Record Examination or the Graduate Management Aptitude Test, and (5) other factors such as personal interview and prior work experience. Enrollment in the program is limited and competition is strong. Meeting the minimum qualification above is not generally sufficient for admission.

Applicants who have completed the prerequisite course work and meet the other requirements may be admitted into the graduate program in full status. Full status is maintained as long as the student achieves a GPA of 3.0 in all course work each semester.

If an applicant presents qualifications that approximate the admissions requirements and standards, that applicant may (at the discretion of the Admissions Committee) be admitted into the graduate program on provisional status. Advancement to full status may be approved by the faculty when the student has satisfactorily completed one or more semesters of graduate studies. Students admitted on provisional status who do not meet GRE/GPA standards will be reviewed by the faculty for dismissal from the program or continuation on probationary status at the end of their first semester of graduate studies if they have not earned at least a 3.0 GPA for all courses attempted or if they have earned a grade of less than "C" in any course. Complete information regarding academic requirements and standards is set forth in Academic Policies and Regulations for the Graduate Programs in Health Administration (M.H.A. and M.S.H.A.).

VCU is a state-aided institution, and preference is given to applicants with equal qualifications who are Virginia residents. International applicants must meet all the regular admission requirements, score a minimum of 600 on the Test of English as a Foreign Language, submit evidence of a preapproved residency site in the home country and submit evidence of financial responsibility as stated in the [Graduate Studies at VCU](#) section of this bulletin.

Application forms and instructions for applying to all graduate programs are available on the [Graduate School Web site](#).

Requests for further information regarding admission requirements, standards and procedures may be directed to the Director, M.H.A. Program, Department of Health Administration, Virginia Commonwealth University, P.O. Box 980203, Richmond, VA 23298-0203.

#### Admission for VCU Honors students

VCU Honors Students are eligible to apply for admission to the M.H.A. Program during their junior or senior years of undergraduate study. The application process is the same as for other applicants with the following exceptions: (1) requirements for the GRE or GMAT are waived; (2) application fee is waived; and (3) official transcript is not needed (as grades can be accessed in the VCU system). The admission decision will be made by the M.H.A. Admissions Committee, at which time a place will be reserved for the student, provided the student graduates with honors and completes the prerequisite course work.

### Academic policies and regulations

Academic policies and regulations for the graduate program in health services administration are set forth in separate documents published by the Department of Health Administration. These departmental documents, as well as publications that state university-wide policies and regulations, may be obtained by applicants at the time of their interviews.

### Transfer credit

Applicants who have earned graduate credit elsewhere or at VCU that has not been previously applied to another earned degree may, at the discretion of the faculty, be permitted to transfer a maximum of one third the didactic semester hours to apply toward the degree credit requirements. Transfer credit may be allowed when, in the judgment of the faculty, the applicant has satisfactorily completed graduate course work elsewhere that is equivalent to courses in the graduate curriculum.

Petitions to transfer credit are to be prepared by the applicant and submitted to the program director prior to entering the program. It is the applicant's responsibility to establish: (1) that the institution has at least regional accreditation, (2) that the course was completed with a grade of "B" or better within the last five years and was not previously applied to an earned degree, and (3) that the course is equivalent to a required or elective course appropriate to the M.H.A. curriculum. (A course syllabus or detailed letter from the instructor, which describes the purpose, objectives, content and course readings will ordinarily be required.) The program director ensures that the petition is sufficiently documented and refers it to the primary instructor of the related course or courses. The primary course instructor reviews and notes a recommendation on the petition and forwards it to the program director for final approval and communication to the Graduate School.

### Curriculum

Students are required to complete a total of 60 semester hours (including transfer credit, if any) to qualify for the Master of Health Administration degree. This requirement includes 46 hours of core course work plus at least six semester hours of elective studies in health administration and related disciplines, such as business administration, public administration, urban and regional planning, and gerontology. In addition, eight semester hours of practicum course work are required as a part of the administrative residency. The graduate program is designed to provide a balanced combination of academic studies and field experience to enable students to achieve the program's educational goals and become well-prepared to enter the field of health administration.

The core curriculum of the graduate program in health administration consists of 16 courses totaling 46 semester hours that must be completed by all degree candidates. These courses represent an integrated series of learning experiences designed to provide students with a common body of knowledge and skills which are considered to be essential.

Core courses	credits
HADM 602 Health System Organization, Financing and Performance	3
HADM 606 Health Care Managerial Accounting	3
HADM 607 Financial Management in Health Organizations	3
HADM 608 Seminar in Health Care Finance	3
HADM 609 Health Systems and Epidemiology Evaluation	3
HADM 610 Health Care Management Decision Support Systems	3
HADM 611 Hospital and Medical Law	4
HADM 612 Health Information Systems and Performance	3
HADM 614 Health Care Marketing	3
HADM 624 Health Economics	3
HADM 631 Managed Care	3
HADM 646 Organization Behavior and Design in Health Care	3
HADM 647 Operations Management in Health Care Organizations	3
HADM 648 Strategic Management in Health Care Organizations	3
HADM 682 Executive Skills I	1
HADM 683 Executive Skills II	1
HADM 691 Special Topics	1
	<hr/> 46

As part of the core curriculum and elective courses, students in the Master of Health Administration program complete a one-year series of executive skills seminars. These seminars are designed to focus on individual

development of personal skills essential to success in health administration.

Students in the M.H.A./J.D. program are required to complete 44 semester hours while in the graduate program in health administration. Students take all the Master of Health Administration curriculum core courses except HADM 611 Hospital and Medical Law and the eight-credit Administrative Residency. M.H.A./J.D. students are waived from HADM 611. It is not necessary to replace this course with another elective course in the M.H.A. program.

Students in the M.D./M.H.A. program are required to complete 47 semester hours while in the graduate program portion. Students take the M.H.A. core courses except HADM 608, 609, 682 and 683. A course in physician practice management is required.

Students in the M.H.A./J.D. and M.H.A./M.D. programs must take one administrative internship of at least three credit hours. This may be completed between the first and second years in the M.H.A. program. Satisfactory completion of the oral comprehensive seminar is required during the semester preceding graduation from both programs.

## Administrative residency

### Purpose of the residency

The administrative residency is an integral part of VCU's graduate program in health services administration. The basic purpose of the residency is to provide students opportunities to apply and further develop their administrative knowledge and skills through a period of applied experience in an operational setting. The administrative residency is supervised directly by experienced executives who serve as the students' preceptors.

Through a carefully selected and organized residency experience, students strengthen the foundation of general knowledge and skills gained through the core curriculum and develop further insight and expertise in their selected concentrations. Students serve their residency in the type of health care organization in which they wish to gain specialized knowledge, skills and experience. Overall policies and guidance for the administrative residency are established by the Department of Health Administration and are included in Handbook for the Administrative Residency of the Graduate Program in Health Administration.

### Appointment to the residency

Students become eligible for entrance into the administrative residency after completing 52 semester hours of specified course work and achieving an overall GPA of 3.0. Students on academic probation or with any incomplete grades during their final on-campus semester prior to their residency may, at the discretion of the faculty, be prevented from entering their residency although their overall GPA is 3.0 or higher.

In addition to meeting the above academic requirements, the student must, in the judgment of the faculty, present evidence of readiness for a clinical experience by demonstrating sufficient academic proficiency in the core areas of the curriculum and by demonstrating professional maturity.

The director of the M.H.A. program or his/her designee has the responsibility to coordinate residency placements. In making these assignments, the director will consider the preferences of the students, the preferences of the preceptors and the recommendations of faculty advisers. Students' preferences may not always be met. Administrative residents are paid a salary by the organization in which they are being sponsored.

### On-campus commitments during the residency

During the residency phase of the graduate program, students must attend scheduled on-campus seminars and must participate in a series of distance-learning seminars on topics related to the residency experience. During the on-campus seminar, students will participate actively in other educational activities associated with course work HADM 693, 694 and 695 taken during the residency year.

### Residency policies and procedures

A complete statement of academic policies and procedures relating to the administrative residency phase of the graduate program is set forth in Administrative Residency Policies and Procedures, in the Handbook for the Administrative Residency of the Graduate Program in Health Administration.

### Length of the program

Students ordinarily will begin their studies during the fall semester and complete their course work requirements within 21 months. For most students, this portion of the graduate program will be followed by an administrative residency of 12 months.

## Requirements for graduation

To qualify for the Master of Health Administration degree, students must meet the following requirements: (1) achieve an overall GPA of 3.0 on a 4.0 scale for all graduate curriculum course work, (2) satisfactorily complete all requirements of the administrative residency including required course work taken during the period, (3) satisfactorily complete an oral seminar administered near the end of the graduate program and, (4) in the judgment of the faculty, demonstrate sufficient maturity, development and abilities in health services administration to constitute readiness to enter the profession of health administration.

Degrees are conferred at commencement exercises of the university in December and May.

## Combined Doctor of Medicine (M.D.) and Master of Health Administration (M.H.A.)

Students may indicate their interest in the combined program prior to matriculation or during the first two years of the M.D. program.

Advanced study in health administration and medicine is available through a dual degree program co-sponsored by the department of Health Administration and the VCU School of Medicine. The program leads to the awarding of the Doctor of Medicine and Master of Health Administration degrees. The objective of the M.D./M.H.A. program is to provide highly motivated medical students the expertise for management and leadership competency in complex health care organizations. The program may be completed in five years. Applicants for this program are required to meet the admission requirements of each program. For information regarding the dual degree program, contact the director of the program.

For the combined degree program, course work for the M.H.A. is initiated following completion of the first two or three years of the M.D. program, occupies a full academic year (fall, spring and summer) and extends into a second year and is taken during the third or fourth year of the M.D. program.

Students interested in the program may contact the School of Medicine

Office of Curriculum or the Director of the M.H.A. Program, Department of Health Administration (School of Allied Health Professions).

For additional information refer to the School of Medicine handbook available on the school's Web site at [www.medschool.vcu.edu](http://www.medschool.vcu.edu).

## Combined Master of Health Administration (M.H.A.) and Juris Doctor (J.D.)

Advanced study in health administration and law is available through dual degree programs co-sponsored by the department and: 1) the T. C. Williams School of Law at the University of Richmond and 2) the School of Law at Washington and Lee University. The program leads to the awarding of the Master of Health Administration and Juris Doctor degrees. Participants are provided the necessary expertise either to represent clients within the health care industry or to function as legal policy-makers or administrators who fully appreciate the legal environment of the health care field. Applicants for this program are required to meet the admission requirements of each program. For information regarding the dual degree program, contact the director of the program.

## Health Services Organization and Research, Doctor of Philosophy (Ph.D.)

### Admission requirements summary

#### Health Services Organization and Research, Doctor of Philosophy (Ph.D.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall only	Apr 15 Applications received by Dec 15 given priority for research fellowship consideration	GRE or GMAT

#### Special requirements:

Contact the department for specific admission requirements

The Ph.D. in Health Services Organization and Research program is a challenging 57-credit program that prepares individuals for positions as faculty, researchers, policy analysts and top-level staff in complex health organizations. Students learn to apply research methods and scientific knowledge drawn from the behavioral and managerial sciences to the study of health organizations, services and systems. The program is designed to meet the distinctive professional development needs of (1) clinical professionals who want to prepare for positions as faculty and independent researchers, (2) administrative professionals who want to prepare for positions as faculty, researchers or consultants, and (3) researchers and policy analysts who want to create depth through specialization in health services organization and research.

Courses are distributed across four areas: foundations of health services organization and research (nine credit hours), health services organization theory (12 credit hours), health services research methods (18 credit hours), and an area of specialization (nine credit hours). Students take two written comprehensive examinations, covering health services organization theory and health services research methods. Areas of specialization are drawn from elective courses and from independent study with faculty members in their areas of expertise, such as long-term care, mental health services, managed care, quality management or international health. The course work is sequenced so that it can be completed in two years of full-time study or three years of part-time study (exclusive of dissertation credits). In addition, nine credit hours of dissertation credit are required. Students orally defend a written dissertation proposal before their dissertation committee. Subsequently they write and orally defend the completed dissertation.

## Admission procedures and requirements

The program admits students with diverse educational, work and life experiences who have demonstrated a capacity to pursue a rigorous course of doctoral study. Admission is limited, competitive and open to students with clear career goals in health services administration and research.

Admission requirements include (1) a graduate degree in an academic or professional field with a GPA of "B" or higher, (2) working knowledge of college-level algebra, especially matrix algebra, (3) advanced courses in statistics and economics, (4) a minimum score of 550 on verbal and 600 on quantitative sections of the GRE, (5) for international students, scores from the Test of English as a Foreign Language, (6) transcripts and application forms, (7) three letters of recommendation, and (8) personal interviews with members of the Admissions Committee. The department recommends that candidates have at least one to two years experience in the health care industry before beginning the program. The application deadline is April 15.

## Department of Nurse Anesthesia

The program was first organized in 1969 as the School of Nurse Anesthetists, thus becoming the first academic program to be implemented in the newly organized School of Allied Health Professions on the MCV Campus.

A letter of intent for a proposed Master of Science in Nurse Anesthesia program was submitted to the commonwealth's Council on Higher Education in 1977. When approved in May 1978, the graduate degree in nurse anesthesia became the first such offering within the profession of nurse anesthesia. While of major importance to the university, it marked a significant milestone for the profession of nurse anesthesia. The first class of graduate students was admitted in the fall of 1979 and graduated in the fall of 1981. A second hallmark was achieved in 1979 with the approval of the postgraduate curriculum for practicing certified registered nurse anesthetists (CRNA) offering a Master of Science in Nurse Anesthesia. The first students graduated in the summer of 1983.

### Administration

#### Michael D. Fallacaro

Professor and Department Chair

### Philosophy

The philosophy of the department reflects the beliefs of the faculty and provides the foundation for the curriculum in the program. The department's philosophy is synergistic with the mission and goals of the School of Allied Health Professions and VCU.

The department is a social agency dedicated to the education and development of health care professionals in the field of nurse anesthesia. Consequently, the faculty recognizes and accepts the responsibility entrusted to it for the learning experiences of its students.

The philosophical orientation of the faculty subscribes to the belief that learning is a developmental process through which cognitive, affective and psychomotor behaviors are developed and/or modified. This process includes the acquisition of information, the transfer of knowledge, the evaluation of new skills and the development of a professional attitude and bearing.

The faculty subscribes to the belief that the learning experience is both positive and rewarding. It is a transactional experience between the student and teacher through formal and informal processes. The program's

objective is the production of knowledgeable and skillful CRNAs. Hence, learning is a lifelong process that results in a change in thinking, values and behavior. The teaching-learning process includes teacher-learner interaction in: setting goals, assessing and selecting learning experiences, determining instructional methods, and evaluating the learner's progress. Learning experiences are planned in manageable segments and provide for integration and continuity in the attainment of knowledge, skills and attitudes consistent with the educational objectives and the individual needs of students. Each student is a unique human being possessing dignity, worth and the right to equal educational opportunities. Faculty and students share the responsibility for creating an educational climate that reflects democratic values, fosters intellectual inquiry and creativity, and encourages the maximum development of each individual's potential.

The American health care system is becoming progressively complex. Technological advances and changing economic patterns foster competition for scarce resources while the patient population is becoming quite diverse. As a result, the role of the CRNA is becoming increasingly collaborative and complementary with other health professionals. In this environment, CRNAs have more responsibility and authority for coordination, decision-making and leadership of the multidisciplinary team, as well as for research, planning and development of health resources.

Graduate education in nurse anesthesia at the master's level builds upon baccalaureate education with a nursing focus. It is designed to allow graduates the opportunity to become leaders and make significant contributions with the intended outcome of improving health care and advancing nurse anesthesia theory and practice through research. Consequently, the program prepares CRNAs through a team concept of a joint practice of anesthesia care composed of both nursing and medical components to meet the current and emerging health needs of society.

## Nurse Anesthesia, Master of Science in (M.S.N.A.)

### Admission requirements summary

#### Nurse Anesthesia, Master of Science in (M.S.N.A.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.N.A.	Fall only	Applications received by Nov 1 given priority consideration	GRE

#### Special requirements:

Contact department for specific [admission requirements](#)

The overall objective of the program is to prepare registered professional nurses for practice in the art and science of the specialty of nurse anesthesia. Given a patient or patient-care situation in the practice of nurse anesthesia, the graduate will:

- formulate and discuss a patient's anesthesia care plan (ASA Classification I-V),
- implement and evaluate anesthesia management plans,
- perform and utilize appropriate procedures during the anesthetic management of a patient,
- evaluate the postoperative course of a patient,
- perform, within medically established guidelines, resuscitation of the newborn infant, child or adult,
- function, within medically established guidelines, as a team leader for cardiovascular and/or pulmonary emergencies,

- provide first echelon care and maintenance of all anesthesia equipment, and
- develop interpersonal behaviors consistent with that of a health care professional.

### Accreditation

The nurse anesthesia program is fully accredited by the Council on Accreditation of Nurse Anesthesia Educational Programs. Graduates are eligible to take the examination for certification conducted by the Council on Certification of Nurse Anesthetists.

### Admission requirements

In addition to the general university requirements, the requirements for admission to the Master of Science in Nurse Anesthesia Program are:

- baccalaureate degree (nursing preferred),
- current licensure as a registered professional nurse in Virginia (by completion of the first semester),
- cumulative undergraduate GPA of 3.0 or higher on a 4.0 scale (preferred),
- upper-division undergraduate organic chemistry course, no lab required (suggested),
- completion of the GRE within five years of application,
- a minimum of one year's experience in an area of acute/critical care nursing (recent),
- personal interview with members of the Admission Committee (by invitation), and
- three professional references (one must be from an immediate supervisor with contact phone number attached).

Further inquiries should be made to the Graduate School, Virginia Commonwealth University, P.O. Box 843051, Richmond, VA 23284-3051, (804) 828-6916. See the [Department of Nurse Anesthesia Web site](#) for more information.

### Curriculum

Fall semester I	credits
NRSA 601 Principles and Practice of Nurse Anesthesia I	4
NRSZ 601L Laboratory in Principles and Practice of Nurse Anesthesia I	1
PHTX 515 Pharmacology for Nurse Anesthetists I	3
PHIS 501 Advanced Mammalian Physiology I	5
	<hr/> 13
Spring semester I	
NRSA 603 Principles and Practice of Nurse Anesthesia III	3
NRSA 622 Clinical Practicum I	1
NRSA 642 Professional Aspects of Anesthesia Practice I	1
MEDC 532 Medicinal Chemistry for Nurse Anesthetists	2
PHTX 516 Pharmacology for Nurse Anesthetists II	3
NRSA 683 Research Methods in Nurse Anesthesia Practice	2
	<hr/> 12
Summer session I	
NRSA 602 Principles and Practice of Nurse Anesthesia II	3



NRSA 623 Clinical Practicum II	1
NRSA 645 Professional Aspects of Nurse Anesthesia Practice II	1
NRSA 633 Pathophysiology for Nurse Anesthesia	3
NRSA 699 Directed Research in Nurse Anesthesia or NRSA 798 1 Thesis	

9

**Fall semester II**

NRSA 699 Directed Research in Nurse Anesthesia or NRSA 798 1 Thesis	
NRSA 624 Clinical Practicum III	6
NRSA 604 Principles and Practice of Nurse Anesthesia IV	2

9

**Spring semester II**

NRSA 699 Directed Research in Nurse Anesthesia or NRSA 798 1 Thesis	
NRSA 625 Clinical Practicum IV	6
NRSA 605 Principles and Practice of Nurse Anesthesia V	2

9

**Summer session II**

NRSA 647 Professional Aspects of Anesthesia Practice III	1
NRSA 626 Clinical Practicum V	6
NRSA 606 Principles and Practice of Nurse Anesthesia Practice IV	2

9

**Fall session III**

ALHP 591 Special Topics in Nurse Anesthesia	3
NRSA 627 Clinical Practicum VI	6

9

## Department of Occupational Therapy

The program in occupational therapy was initiated at Richmond Professional Institute in 1942. In 1965, the graduate program leading to a Master of Science degree in basic professional education in occupational therapy was initiated. The School of Occupational Therapy became a department in the School of Allied Health Professions in 1970.

**Administration****Shelly J. Lane**

Professor and Department Chair

**Philosophy**

The philosophy of the Department of Occupational Therapy embraces the philosophical base of occupational therapy stated by the American Occupational Therapy Association (1979):

Man is an active being whose development is influenced by the use of purposeful activity. Human beings are able to influence their physical and mental health and their social and physical environment through purposeful activity. Human life is a process of continuous adaptation. Adaptation is a change in function that promotes survival and self-actualization. Biological, psychological and environmental factors may interrupt the adaptation process at any time throughout the life cycle, causing dysfunction. Purposeful activity facilitates the adaptive process. Purposeful activity (occupation), including its interpersonal and environmental components, may be used to prevent and mediate dysfunction and to elicit maximum function. Activity as used by occupational

therapists includes both an intrinsic and a therapeutic purpose. (AOTA. [1979]. The philosophical base of occupational therapy. AJOT, 33, 785.)

**Mission**

The primary mission of the Department of Occupational Therapy is the preparation of excellent, innovative, adaptable and responsible occupational therapists as professional leaders for the state and the nation.

In pursuit of this mission, the department:

- fosters student commitment to scientific inquiry and professional competence, and promotes personal growth, balance and dedication to lifelong learning,
- promotes faculty excellence and collaboration in teaching, scholarship and research that models integrity and competence,
- collaborates with the community through education, consultation and the development of strong linkages with clinical educators and the community, and
- interacts dynamically with the occupational therapy profession and stakeholders, contributing proactively to the evolution of the profession.

**Facilities**

The educational facilities of the Department of Occupational Therapy are located in the Virginia Mechanics Institute Building at the northeast corner of 10th and Marshall streets. During the professional master's degree program, fieldwork assignments are made for students in a wide range of clinics and agencies in the Richmond metropolitan area. A 24-week extended fieldwork requirement will be arranged in approved clinical education facilities throughout the United States.

**Honors and awards****A. D. Williams Award**

An annual award presented to second-year students with cumulative 4.0 GPAs for the entire curriculum.

**Commonwealth of Virginia Graduate Fellowship Award**

These awards are presented to graduate student(s) with high academic and professional potential. Preference is given to residents of Virginia, and financial need is considered.

**Patti Ann Maurer Scholarship**

This award is given to the top-ranked applicant for the professional master's program.

**Gudger-Garris Scholarship Award**

This award is a bequest from Lucille Gudger. It is awarded each year to students in the occupational therapy program in good academic standing with financial need.

### C.A. Kooiman Memorial Award

This award is given in memory of C.A. Kooiman, director of the occupational therapy curricula from 1961 to 1976. The award recipient is chosen by the graduating class as the person who best exemplifies the nature and characteristics of Kooiman.

### Programs

Three courses of study are offered:

1. A Master of Science in Occupational Therapy, a professional entry-level degree program, is designed for students who wish to become occupational therapists.
2. A post-professional Master of Science is available for registered occupational therapists.
3. A post-professional Occupational Therapy Doctorate also is available for registered occupational therapists.

### Academic regulations

Students are admitted to the occupational therapy programs with the expectation that they will direct maximum time and effort to the learning process. Outside activities must be scheduled by students for such dates and hours as permit full compliance with the time requirements for course work. Tardiness, lack of regular attendance or failure to meet deadlines for course assignments will not be excused because of employment or other outside activities.

To continue in the graduate curriculum, students are expected to maintain a cumulative GPA of 3.00 based on course work following matriculation.

- Graduate students who fail to maintain a 3.00 cumulative GPA or receive a grade of "D" (regardless of the cumulative GPA) will automatically be placed on probation and will be notified of probationary status.
- Conditions of probation: students must earn a quality point average during the semester of probation sufficient to result in a cumulative GPA of 3.0 in order to be removed from probationary status.

Students who are on probation due to receiving a "D" grade must retake that course, achieving a grade of "C" or better while also meeting all other academic standards.

Conditions of probation also may include recommendations for academic counseling, assignments by individual instructors and other requirements identified by the Committee on Academic Standing and Student Progress. Conditions of probation will be detailed in a letter of notification of probation prepared by this committee.

Only one semester of academic probation is permitted in the program. If probationary students fail to meet academic standards (GPA of 3.00) in a second semester or do not successfully complete deficient courses, they will be considered for dismissal.

- As courses usually are offered only once a year and because early courses serve as prerequisites for later courses, students retaking a course or taking a reduced course load will have to continue under an adjusted curriculum plan. This will result in extending the student's

time in the program.

- Students who receive an "F" grade in any required course will be considered for dismissal by the committee.
- University standards require that a graduate student must not have more than six semester hours or 20 percent of semester hours attempted, whichever is greater, with a grade of "C." Students who receive a grade of "C" on more than the allowable number of semester hours will be reviewed for possible academic termination by the Committee on Academic Standing and Student Progress. Students who are not terminated for this criterion will be placed on automatic probation.
- If a student withdraws or is terminated by the clinical faculty before the completion of the Level II Fieldwork course, the student will receive an "U" grade for the course.

If the student withdraws, is terminated or fails a fieldwork experience, the course may be repeated only upon approval by the Committee on Academic Standing and Student Progress in consultation with the department chair and the fieldwork coordinator. Students may be dismissed from the program or be allowed to continue contingent upon fulfilling remedial activities based on a plan prepared by the fieldwork coordinator and ratified by the committee. No more than one additional fieldwork experience will be rescheduled. The opportunity to reregister and repeat the fieldwork course is contingent upon the fieldwork coordinator's ability to locate another facility willing to offer a fieldwork experience to the student and upon the support of the committee. Level II Fieldwork must be completed no later than 24 months subsequent to the completion of the academic phase.

- To continue in good standing, students also are expected to:
  - pay all fees,
  - maintain personal attributes and ethical behaviors consistent with professional practice as defined in the Occupational Therapy Department Student Handbook, and
  - complete fieldwork requirements to the satisfaction of clinical and academic faculty.
- Although arrangements are made in advance, each student is reviewed prior to placement in the Level II Fieldwork education. Students must have satisfactorily completed courses prerequisite to that fieldwork experience and be recommended by the faculty. They must demonstrate professional behavior as specified in the ethical behaviors listed in the Occupational Therapy Department Student Handbook. Medical problems may delay or prevent fieldwork placement.

## Occupational Therapy, Master of Science in (M.S.O.T.)

### Admission requirements summary

#### Occupational Therapy, Master of Science in (M.S.O.T.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.O.T.	Summer only	Feb 1 (Applications accepted between Nov 1 and Feb 1.)	GRE



**Special requirements:**

Contact department for specific admission requirements.

Entry level masters supplemental application link:

Supplemental application materials are available on the Web at <http://www.sahp.vcu.edu/occu/programs/entrylevel.htm>.

The Department of Occupational Therapy offers a Master of Science in Occupational Therapy, a professional degree program designed for students who wish to become occupational therapists. This program may be completed in seven consecutive semesters. Applications will be accepted from students who have completed at least three year's of bachelor's degree course work (90 semester credits). The professional master's degree program includes academic courses, research activities and a minimum of 24 weeks of full-time fieldwork.

**Accreditation**

The professional master's degree program to become an occupational therapist is accredited by the Accreditation Council for Occupational Therapy Education, 4720 Montgomery Lane, P.O. Box 31220, Bethesda, MD 20824-1220; telephone (301) 652-2682.

**Admission requirements**

Applicants for the professional master's degree program must complete the following prerequisites with a grade of "C" or better (credits are listed in semester credit hours) with a minimum overall prerequisite GPA of 3.00:

	credits
English	6
Human anatomy and physiology (laboratory courses)	6
Social sciences	15
Must include:	
Life-span development course(s) sufficient to cover entire life span (3-6)	
Abnormal psychology (3)	
Other social sciences courses (psychology, sociology, social psychology, anthropology) (6-9)	
Statistics	3

Computer competence — the ability to use a personal computer for word processing, e-mail, online bibliographic searches and Internet listserv discussion — is required. It is helpful to be familiar with graphics software for preparing presentations. A course on medical terminology is strongly recommended.

These are considered minimal prerequisites, and applicants are encouraged to pursue additional study in liberal arts and science courses that develop intellectual competence, enrich interest areas and promote an awareness of the breadth of social and cultural values. To fulfill the human development prerequisite, it is important to read course descriptions carefully, as many courses say they cover the life span but primarily focus on a single area (e.g., childhood). To meet this requirement, students will need courses that prepare across the life span. To fulfill the psychology prerequisite, a course in theories of personality is highly recommended.

A total of 60 hours experience in at least two occupational therapy settings (one with adults and one with children) is required. Criteria for admission include GPA (overall and prerequisite GPA will be calculated), scores on the GRE and professional criteria, including experience, references, professional attributes and statement of professional goals.

Graduates of occupational therapy programs are required to take the national certification examination to become an Occupational Therapist Registered. The national certifying organization for occupational therapy is the National Board for Certification in Occupational Therapy (NBCOT). Other licensure or certification requirements may be established by state

organizations. Some licensure or certification agencies consider individuals convicted of a felony ineligible for licensure or certification. For specific information, prospective students should contact the licensure or certification agency for occupational therapy.

Application forms and instructions for applying to all graduate programs are available on the [Graduate School Web site](#).

University tuition and fees apply. Additional departmental course fees are calculated each semester to cover materials and supplies. Semester course fees vary but rarely exceed \$75 per semester. Fees will not exceed \$100 each semester, per departmental policy.

**Curriculum**

The total program is planned for completion in seven semesters of full-time study and encompasses academic and fieldwork education as well as a research experience.

	credits
<b>Summer I</b>	
ANAT 525 Human Anatomy	5
OCCT 530 Nature of Occupational Therapy	2
	<hr/>
	7
<b>Fall I</b>	
OCCT 520 Occupational Therapy Applications: Kinesiology	2
OCCT 522 Interdisciplinary Medical Lectures	3
OCCT 531 Interpersonal Communication and Group Dynamics	2
OCCT 532 Life Span Occupational Development	3
OCCT 533 Occupational Therapy Principles, Values and Theories	4
OCCT 620 Occupational Therapy Practice Activities I	1
	<hr/>
	15
<b>Spring I</b>	
ANAT 529 Advanced Functional Neuroanatomy	1
OCCT 521 Neuroscience Applications to Occupational Therapy	2
OCCT 534 Occupational Therapy Evaluation and Intervention Overview	3
OCCT 630 Adult Evaluation and Intervention I: Foundations	2
OCCT 635 Psychosocial Evaluation and Intervention I	2
OCCT 640 Pediatric Evaluation and Intervention I: Infant and Preschool Children	3
OCCT 660 (Section 001) Level I Fieldwork in Occupational Therapy	1
	<hr/>
	14
<b>Fall II</b>	
OCCT 621 Occupational Therapy Practice Activities II	1
OCCT 631 Adult Evaluation and Intervention II: Activities of Daily Living	2
OCCT 632 Adult Evaluation and Intervention III: Work, Play/Leisure, Geriatrics	2
OCCT 641 Pediatric Evaluation and Intervention II: Ages 6-12	4
OCCT 660 (Section 002) Level I Fieldwork in Occupational Therapy	1
OCCT 709 Research Process and Statistical Analysis in Occupational Therapy	4
	<hr/>
	14
<b>Spring II</b>	
OCCT 623 Occupational Therapy Practice Activities III	1
OCCT 636 Psychosocial Evaluation and Intervention II	2
OCCT 650 Occupational Therapy in Health Care	3
OCCT 651 Administration and Supervision of Occupational Therapy Services	3
OCCT 670 Case Based Clinical Reasoning in Occupational Therapy	2
OCCT 729 Research Practicum	3

	14
<b>Summer III</b>	
OCCT 680 Level II Fieldwork in Occupational Therapy	9
	9
<b>Fall III</b>	
OCCT 681 Level II Fieldwork in Occupational Therapy	9
	9
<b>Total credits in program</b>	<b>82</b>

Upon successful completion of the program, students are eligible to take the national certification examination. Certification is required by most employers as proof of professional competence.

For additional information, visit the [Department of Occupational Therapy Web site](#).

### **Combined Certificate in Aging Studies (Postbaccalaureate graduate certificate) and Master of Science in Occupational Therapy (M.S.O.T.)**

The departments of Occupational Therapy and Gerontology have developed a specialized version of the Certificate in Aging Studies program for students completing the Master of Science in Occupational Therapy. Students must meet admission requirements for the occupational therapy degree and the gerontology certificate program. The student is required to complete the following courses:

	credits
GRTY 601 Biological and Physiological Aging	3
GRTY 602 Psychology of Aging	3
GRTY 605 Social Gerontology	3
GRTY 606 Aging and Human Values, or	3
GRTY 616 Geriatric Rehabilitation, or	
OCCT 655 Older Adult Advanced Assistive Technology	
Application in Occupational Therapy, or	
GRTY 691 Geriatric Interdisciplinary Team Training	
OCCT 691 Special Topics	2
OCCT 709 Research Process and Statistical Analysis in	4
Occupational Therapy	
OCCT 729 Research Practicum in Occupational Therapy	3
	21

Contact the respective departments for additional curriculum information.

### **Occupational Therapy, Post-professional Master of Science (M.S.)**

#### **Admission requirements summary**

##### **Occupational Therapy, Post-professional Master of Science (M.S.)**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.	Fall preferred		GRE

##### **Special requirements:**

Contact department for specific admission requirements

Post-professional masters application link:

Supplemental application materials are available on the Web at [www.sahp.vcu.edu/occu/programs/ppmasters.htm](http://www.sahp.vcu.edu/occu/programs/ppmasters.htm).

The Department of Occupational Therapy offers a post-professional Master of Science program that is available for registered occupational therapists. It is a distance education program combining Internet-based course work with optional on-site instructional periods. A minimum of 33 semester hours, including a thesis, is required.

The Post-professional Master of Science in provides bachelor's-degreed, registered occupational therapists with opportunities to develop advanced clinical problem-solving skills and abstract reasoning. Upon program completion, the student should have increased ability to:

- provide theory and evidence-based practice,
- engage in advanced clinical program solving,
- use research skills to assist in developing new clinical knowledge and in program evaluation, and
- fulfill expanded roles, and seek out and create roles in new settings.

#### **Admission requirements**

Applicants must have earned a bachelor's degree from an accredited college or university and be certified by the National Board of Certification in Occupational Therapy, Inc. An official report of scores on the GRE is required.

Application forms and instructions for applying to all graduate programs are available on the [Graduate School Web site](#).

#### **Curriculum**

The program is primarily a Web-based distance education program, with optional on-campus course work for some courses. This program follows the traditional fall, spring and summer semester schedule. It consists of theory and research core courses, electives for concentrated study, and at least six credits of thesis research. Students should enter the program with a concentration and research interest identified. Concentration areas currently available include gerontology and pediatrics. Up to six credits of electives may be taken at other institutions and transferred in, with permission of adviser. The curriculum includes the following 33 credit hours of courses:

<b>Theory core</b>	credits
OCCT 671 Advanced Theory in Occupational Therapy	3
OCCT 672 Dimensions of Occupation	3
OCCT 673 Health Care Delivery and Occupational Therapy	3
Practice Models	
	9
<b>Research core</b>	
OCCT 710 Research Process in Occupational Therapy	3
OCCT 711 Research Process in Occupational Therapy: Qualitative 3	
Methods	
Statistics (taken outside the department)	3
	9
<b>Thesis</b>	
OCCT 798 Thesis	3
OCCT 799 Thesis	3
	6

##### **Concentration course options**

(additional courses may be taken, with approval)

OCCT 654 Advanced Assistive Technology Applications in Occupational Therapy: Children and Young Adult (3)	9
OCCT 655 Older Adult Advanced Assistive Technology Application in Occupational Therapy (3)	

OCCT 656 Advanced Neuroscience Applications in Occupational Therapy (3)  
 OCCT 661 School-based Therapy (3)  
 OCCT 662 Neuroscience Review and Sensory Integration Theory (3)  
 OCCT 663 Beyond the Basics: Advanced Evaluation and Intervention in Pediatric Occupational Therapy (3)  
 OCCT 690 Occupational Therapy Seminar (1-3)  
 OCCT 691 Special Topics in Occupational Therapy (3)  
 OCCT 697 Independent Study (3)  
 OCCT 793 Clinical Specialty Practicum (3)  
 Gerontology courses

9

The program is designed to permit part- or full-time study. Courses are generally taught once yearly.

For additional information, visit the [Department of Occupational Therapy Web site](#).

### **Combined Certificate in Aging Studies (Postbaccalaureate graduate certificate) and Post-professional Master of Science in Occupational Therapy (M.S.)**

The departments of Occupational Therapy and Gerontology have developed a specialized version of the Certificate in Aging Studies program for students completing the post-professional Master of Science in Occupational Therapy. Students must meet admission requirements for the occupational therapy degree and the gerontology certificate program. The student is required to complete the following courses:

	credits
GRTY 601 Biological and Physiological Aging	3
GRTY 602 Psychology of Aging	3
GRTY 605 Social Gerontology	3
GRTY 606 Aging and Human Values, or	3
GRTY 616 Geriatric Rehabilitation, or	
OCCT 655 Older Adult Advanced Assistive Technology	
Application in Occupational Therapy, or	
GRTY 691 Geriatric Interdisciplinary Team Training	
OCCT 710 Research Process in Occupational Therapy	3
OCCT 711 Research Process in Occupational Therapy:	3
Qualitative Methods	
OCCT 798 Thesis	3
	21

Contact the respective departments for additional curriculum information.

### **Occupational Therapy, Post-professional Occupational Therapy Doctorate (O.T.D.)**

#### **Admission requirements summary**

#### **Occupational Therapy, Post-professional Occupational Therapy Doctorate (O.T.D.)**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
O.T.D.	Fall preferred		GRE

#### **Special requirements:**

Contact department for specific admission requirements.

OTD supplemental application link:

Supplemental application materials are available on the Web at [www.sahp.vcu.edu/occu/programs/otd/applicationotd.htm](http://www.sahp.vcu.edu/occu/programs/otd/applicationotd.htm).

The Department of Occupational Therapy offers a post-professional Occupational Therapy Doctorate (O.T.D.) program that is available for registered occupational therapists. It is an on-campus distance education program combining Web-based course work with on-site instructional periods. A minimum of 43 semester hours is required for students entering with an M.S. in Occupational Therapy; 55 semester hours are required for students entering with a B.S. in Occupational Therapy. Students entering with a bachelor's degree in occupational therapy will receive a dual degree: M.S./O.T.D. Students who have received their occupational therapy degree within the past five years may have some courses waived; please contact the department for more information.

The post-professional OTD provides opportunities to develop advanced clinical leadership skills. Upon program completion, the student should have increased ability to:

- articulate and appraise the complexity of occupation, disability and the rehabilitation process;
- develop and evaluate advanced clinical problem solving;
- synthesize up-to-date health care theoretical foundations and evaluate their application to clinical practice and leadership experiences;
- engage in critical analysis of practice and leadership issues;
- critique the research processes inherent in literature related to practice and implement critical analysis of published research;
- organize, plan and prepare a proposal addressing a clinical issue;
- design, conduct and appraise self-knowledge of evidence-based practice;
- examine changes in the health care arena and judge the impact of change on clinical practice;
- apply knowledge of leadership theory;
- develop, plan, implement and assess leadership activities leading to enhancement of individual leadership skills and knowledge;
- analyze strengths and needs in all areas; and
- identify areas for lifelong learning and professional development.

#### **Curriculum**

The program is an on-campus distance education program combining Web-based instruction with on-campus meetings at the beginning and end of the semester. Efforts will be made to combine these on-campus visits. This program follows the traditional fall and spring semester schedule; summer courses are required for students entering with a bachelor's degree and are optional for students entering with a master's degree. The curriculum consists of leadership, research/scientific foundation and theory practice foundation core courses, along with electives for concentrated study.

The curriculum for an occupational therapist entering with a baccalaureate includes the following 55 credit hours of courses:

#### **Leadership Core**

OCCT 736 Developing Fundable Projects

OCCT 740 Concepts in Disability Leadership for Occupational Therapists

OCCT 741 Disability Leadership Applications for Occupational Therapists

OCCT 742 Practicum in Leadership for Occupational Therapists

OCCT 743 Synthesis and Evaluation of Capstone Project (pending approval)

**Research/Scientific Foundation Core**

OCCT 656 Advanced Neuroscience Applications in Occupational Therapy  
 OCCT 710 Research Process in Occupational Therapy  
 OCCT 711 Research Process in Occupational Therapy: Qualitative Methods  
 OCCT 735 Evidence Bases for Occupational Therapy Practice

**Theory/Practice Foundation Core**

OCCT 671 Advanced Theory in Occupational Therapy  
 OCCT 672 Dimensions of Occupation  
 OCCT 673 Health Care Delivery and Occupational Therapy Practice Models  
 OCCT 685 Advanced Clinical Reasoning: Asking the Right Questions  
 OCCT 686 Advanced Clinical Reasoning Applications

**Electives**

The curriculum for an occupational therapist entering with a master's degree includes the following 43 credit hours of courses:

**Leadership Core**

OCCT 736 Developing Fundable Projects  
 OCCT 740 Concepts in Disability Leadership for Occupational Therapists  
 OCCT 741 Disability Leadership Applications for Occupational Therapists  
 OCCT 742 Practicum in Leadership for Occupational Therapists  
 OCCT 743 Synthesis and Evaluation of Capstone Project (pending approval)

**Research/Scientific Foundation Core**

OCCT 656 Advanced Neuroscience Applications in Occupational Therapy  
 OCCT 710 Research Process in Occupational Therapy  
 OCCT 711 Research Process in Occupational Therapy: Qualitative Methods  
 OCCT 735 Evidence Bases for Occupational Therapy Practice

**Theory/Practice Foundation Core**

OCCT 671 Advanced Theory in Occupational Therapy  
 OCCT 672 Dimensions of Occupation  
 OCCT 673 Health Care Delivery and Occupational Therapy Practice Models

**Electives**

For additional information, visit the Department of Occupational Therapy Web site at [www.sahp.vcu.edu/occu](http://www.sahp.vcu.edu/occu).

## Department of Physical Therapy

The Department of Physical Therapy was established in 1945 to provide basic preparation for the practice of physical therapy. Between 1945 and 1954, the program consisted of a 12-month professional course designed to train students for entry into the profession. This program was based upon at least three years of college work or the possession of a registered nurse certificate. A two-year professional program after two years of preparatory college work was initiated in 1954. This program led to the degree of Bachelor of Science in Physical Therapy. In 1968, the Department of Physical Therapy became part of the School of Allied Health Professions. The two-year professional program leading to the Bachelor of Science degree continued through the 1988-89 academic year.

In August 1989, the Department of Physical Therapy, School of Allied Health Professions, began a three-year professional program based on three years of previous college work that leads to a Master of Science degree. On Feb. 8, 2001 the VCU Board of Visitors approved a proposal to offer a Doctor of Physical Therapy as the entry-level professional degree. The State Council of Higher Education in Virginia gave its final approval for

the proposal on June 20, 2001. The first class to study the professional program began in July 2002.

In addition to the professional program, the department participates in four collaborative and interdisciplinary Ph.D. programs.

**Administration****Thomas Mayhew**

Associate Professor and Department Chair

**Mission**

The Department of Physical Therapy serves the people of the commonwealth of Virginia and the nation by providing educational programs related to physical therapy. The department provides an environment that encourages education through problem solving, free inquiry, professional behavior and scholarship. The department's primary focus is to prepare individuals for general physical therapy practice. These practitioners are educated to serve as an entry point into the health care system for consumers. Post-professional programs provide quality education leading to careers in teaching and research. The department also provides assistance and services to the community and engages in research and scholarly activities related to the practice of physical therapy.

**Philosophy**

Physical therapy is an integral part of the health care system. Expanding knowledge in the basic and clinical sciences, and changes in the needs and mandates of society, continually place new demands on the physical therapy profession. The faculty of the Department of Physical Therapy is committed to providing educational programs responsive to expanding knowledge and the needs of society.

The primary principle directing the activities of the department is the faculty's commitment to optimal patient care through physical therapy education, research and practice. The faculty strongly believes that physical therapists must have a thorough understanding of the theoretical bases for treatment and skills in problem solving, evaluation and communication.

The faculty also believes that physical therapists have a responsibility to develop skills for lifelong learning (e.g., the ability to find information and to critically analyze that information).

The faculty also is committed to the development and sharing of new knowledge in the field of physical therapy through scholarship and research.

**Objectives**

The objectives of the Department of Physical Therapy, in concert with the mission of the university and the School of Allied Health Professions, are to:

- provide an entry-level postbaccalaureate educational program for full-time students with diverse backgrounds and experiences,
- contribute to interdisciplinary post-professional doctoral programs that prepare physical therapists to contribute to the understanding and application of therapeutic procedures through basic and applied research and to teach both clinical and didactic physical therapy on all academic levels,
- provide an atmosphere that fosters critical thinking, intellectual curiosity and integrity, freedom of expression, personal growth and professional competence, and a commitment to learning for faculty

and students,

- provide an environment that facilitates research and scholarship directed toward optimizing patient care, and
- provide services to the public and professional communities.

## Facilities

The educational facilities for the Department of Physical Therapy are located on the basement floor of A.D. Williams/West Hospital. These buildings, located on the northeast corner of 12th and Broad streets, house administrative and faculty offices, classrooms, physical therapy instructional, computer and research laboratories, and student locker rooms. Classrooms in other buildings on the MCV Campus are used as needed.

Clinical education experiences for professional students are offered in physical therapy clinics throughout Virginia and the country.

## Graduate (postprofessional) programs in physical therapy

The Department of Physical Therapy is committed to improving physical therapy services through graduate education and research. The department participates in several cooperative and interdisciplinary doctoral programs. Physical therapy tracks are offered in the Ph.D. programs of the Department of Anatomy and Neurobiology and the Department of Physiology. An interdisciplinary Ph.D. in Rehabilitation and Movement Science is offered in conjunction with two other departments at VCU: Department of Exercise Science in the School of Education and the Department of Physical Medicine and Rehabilitation in the School of Medicine. Also, the department participates in the School of Allied Health Professions' Ph.D. in Health Related Sciences.

Education at the Ph.D. level is a highly independent adventure. The curricula offered by the Department of Physical Therapy through joint ventures with other departments allow students the opportunity to focus on highly divergent aspects of research related to physical therapy. Each of the programs also offers students opportunity to hone teaching skills in preparation for a well-rounded academic career.

Regardless of the chosen program or track, each Ph.D. student conducts a substantial original research project. Individuals interested in doctoral education are encouraged to examine the research interest areas of faculty in each of the participating departments and to consult with the program directors before submitting their application to a specific program.

## Admission requirements

Applications are encouraged from individuals who are practicing physical therapists. Applicants must have graduated from a physical therapy educational program approved by the American Physical Therapy Association. International students must have an equivalent level of education as determined by the Office of International Admissions. Individuals who are not physical therapists are not accepted into the advanced degree programs.

Additional admission requirements for graduate study in the Department of Physical Therapy are as follows:

1. a minimum GPA of 2.7 on a 4.0 scale for entry-level professional education,
2. satisfactory score on the general test of the GRE (taken no more than five years prior to admission),
3. three satisfactory letters of recommendation,
4. applicant's written statement of intent for pursuing graduate studies in

a particular program, and

5. such additional requirements as established for each specific program.

International students also must score a 600 or above on the Test of English as a Foreign Language (TOEFL)(250 on computer-based test).

## Financial assistance

Some teaching and research assistantships are available from the Department of Physical Therapy. These assistantships are competitive. Part-time employment as a physical therapy clinician is available in Richmond and surrounding areas. Doctoral students receiving stipends must receive approval of outside employment.

VCU provides three types of student assistance: scholarships, loans, and work study. For information on these types of financial assistance, write to the Office of Financial Aid, Virginia Commonwealth University, MCV Campus, Richmond, VA 23298-0244.

Priority consideration is given to applications received by Jan. 7.

## Physical Therapy Track in Anatomy Ph.D. program

### Admission requirements summary

#### Physical Therapy Track in Anatomy Ph.D. program

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall	Applications received prior to Jan 7 given priority consideration	B.S., M.S. or D.P.T. in Physical Therapy  Contact Physical Therapy or Anatomy for specific admission requirements

The departments of Anatomy and Neurobiology and Physiology of the School of Medicine, together with the Department of Physical Therapy of the School of Allied Health Professions offers Ph.D. programs in anatomy-physical therapy and physiology-physical therapy. The goals of the doctoral programs are to train students in research and educational skills in preparation for students to function as physical therapy faculty members. Application is made to either the Department of Anatomy and Neurobiology or the Department of Physiology. Acceptance into either of the programs requires approval by the admission committees of the cooperating departments. **Graduates receive either the Ph.D. in Anatomy or the Ph.D. in Physiology.**

Students in the Anatomy/Physical Therapy Doctoral Program take required courses within the departments of Anatomy and Neurobiology and Physical Therapy. Students in the Physiology/Physical Therapy Program take required courses within the departments of Physiology and Physical Therapy. (Other courses may be required by the students dissertation committee.) In both programs, the student plans and conducts a research study generally under the direction of a faculty member of the Department of Physical Therapy; however, the dissertation adviser may be from either of the two primary departments. In addition, the student is required to assist in teaching three courses.

In addition to the requirements listed above, admission to either the anatomy/physical therapy or physiology/physical therapy programs requires:

- a minimum of a bachelor's degree,



- graduation from an accredited program in physical therapy (or equivalent, if trained outside the United States) and
- demonstrated clinical experience in physical therapy.

Applicants to the physiology/physical therapy program also are encouraged to have completed at least one course in organic chemistry. Applicants should refer to the departmental Web site for more information or contact:

Dr. Sheryl Finucane, Director of Graduate Studies  
Department of Physical Therapy  
School of Allied Health Professions  
Virginia Commonwealth University  
P.O. Box 980224  
Richmond, VA 23298-0224  
Phone: (804) 828-0234

For additional information about the collaborating departments, refer to their Web sites:

- Department of Physical Therapy
- Department of Anatomy and Neurobiology
- Department of Physiology

## Physical Therapy Track in Physiology Ph.D. program

### Admission requirements summary

#### Physical Therapy Track in Physiology Ph.D. program

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall	Applications received prior to Jan 7 given priority consideration	B.S., M.S. or D.P.T. in Physical Therapy Contact Physical Therapy or Anatomy for specific admission requirements

The departments of Anatomy and Neurobiology and Physiology of the School of Medicine, together with the Department of Physical Therapy of the School of Allied Health Professions offers Ph.D. programs in anatomy-physical therapy and physiology-physical therapy. The goals of the doctoral programs are to train students in research and educational skills in preparation for students to function as physical therapy faculty members. Application is made to either the Department of Anatomy and Neurobiology or the Department of Physiology. Acceptance into either of the programs requires approval by the admission committees of the cooperating departments. **Graduates receive either the Ph.D. in Anatomy or the Ph.D. in Physiology.**

Students in the Anatomy/Physical Therapy Doctoral Program take required courses within the departments of Anatomy and Neurobiology and Physical Therapy. Students in the Physiology/Physical Therapy Program take required courses within the departments of Physiology and Physical Therapy. (Other courses may be required by the students dissertation committee.) In both programs, the student plans and conducts a research study generally under the direction of a faculty member of the Department of Physical Therapy; however, the dissertation adviser may be from either of the two primary departments. In addition, the student is required to assist in teaching three courses.

In addition to the requirements listed above, admission to either the anatomy/physical therapy or physiology/physical therapy programs

requires:

- a minimum of a bachelor's degree,
- graduation from an accredited program in physical therapy (or equivalent, if trained outside the United States) and
- demonstrated clinical experience in physical therapy.

Applicants to the physiology/physical therapy program also are encouraged to have completed at least one course in organic chemistry. Applicants should refer to the departmental Web site for more information or contact:

Dr. Sheryl Finucane, Director of Graduate Studies  
Department of Physical Therapy  
School of Allied Health Professions  
Virginia Commonwealth University  
P.O. Box 980224  
Richmond, VA 23298-0224  
Phone: (804) 828-0234

For additional information about the collaborating departments, refer to their Web sites:

- Department of Physical Therapy
- Department of Anatomy and Neurobiology
- Department of Physiology

## Physical Therapy, Doctor of (D.P.T.)

The Doctor of Physical Therapy program offers two tracks: an entry-level track and a postprofessional track. The professional Doctor of Physical Therapy prepares students for entry into the profession, while the Transitional Doctor of Physical Therapy provides advanced course work for practicing physical therapy clinicians.

### Administration

School of Allied Health Professions  
Cecil B. Drain  
Dean

Physical Therapy Admissions  
Emma Wheeler  
Admissions Coordinator

1200 E. Broad St., Room B-216  
P.O. Box 980224  
Richmond, VA 23298  
(804) 828-0234

**Thomas Mayhew**  
Associate Professor and Department Chair

### Professional Track

The goal of this program is to provide a quality educational program that prepares students for entry into the profession of physical therapy. The program prepares students to evaluate and manage patients with physical therapy problems effectively and in accordance with ethical principles. The program also provides students with strategies to continually define and meet their own educational needs in order to keep skills and knowledge

current throughout their professional careers. Upon completion of the program, students are awarded a Doctor of Physical Therapy degree.

## Objectives

Satisfactory performance in the educational experiences provided in the Doctor of Physical Therapy program prepares the graduate to:

- within the scope of physical therapy practice, effectively examine, evaluate, diagnose and determine the prognosis of individuals with impairments, functional limitations and disabilities.
- within the domain of physical therapy practice, apply health promotion principles and practices in primary, secondary and tertiary prevention.
- manage physical therapy problems in a safe, ethical, legal and professional manner.
- use appropriate educational principles to design methods to teach patients/clients, caregivers, colleagues and other health care professionals.
- effectively manage changes in the physical function and health status of patients/clients.
- collaborate with other health care practitioners to achieve the optimum delivery of health care.
- select and implement safe and effective physical therapy interventions and assess the subsequent outcomes.
- determine the need for further examination or consultation by another physical therapist or for referral to another health care professional.
- manage human and material resources and services to provide high quality and cost effective physical therapy services in diverse settings.
- apply concepts and principles of management to effectively supervise support personnel to whom tasks have been delegated.
- effectively document patient information and physical therapy services to colleagues in an organized, logical and concise manner.
- integrate basic principles of critical inquiry to evaluate, interpret and utilize professional literature in clinical practice, participate in clinical research activities and critically analyze new concepts in the application of physical therapy practice.
- effectively communicate, verbally and non-verbally, with patients and their caregivers, health care personnel and members of the community.
- demonstrate an awareness of the influence of social, economic, legislative and demographic factors of the delivery of health care.
- demonstrate an understanding of the importance of lifelong learning and a commitment to the physical therapy profession.

## Admission requirements

Prerequisites for admission to the professional Doctor of Physical Therapy program include a Bachelor of Arts or Science degree from an accredited college or university. If your university has given you college credits for your AP courses and/or exam, and it is listed on your transcript, we will accept those credits. A grade of "D" in any required prerequisite course is not acceptable. A minimum GPA of 2.7 (in a 4.0 system) is required to be

considered for admission. The GRE is required; the scores should be reported directly to Virginia Commonwealth University. For non-native English-speaking applicants, regardless of immigration status, a Test of English as a Foreign Language (TOEFL) score of at least 600 (score of 250 on computerized exam) is required; scores should be reported directly to Virginia Commonwealth University. The program of study necessary to be considered for admission to the professional Doctor of Physical Therapy program must include a minimum of the following subject areas:

Biological sciences – 12 semester hours including laboratory experiences

- Must include four credits of college-level biology.
- Must include four credits of anatomy and four credits of human physiology, or eight credits of anatomy/physiology.
- An exercise physiology course is not an acceptable substitute for a human physiology course.
- Cell biology and histology are highly recommended but not required.

Chemistry – eight semester hours including laboratory experiences

English – six semester hours

- Must include three credits of English and three credits of a writing intensive course.
- The writing intensive course does not have to be offered through the Department of English.

Humanities – three semester hours

- A course in philosophy or ethics is required.

Mathematics – three semester hours

- These credits must be in precalculus or a more advanced mathematics course.

Physics – eight semester hours of general physics with laboratory

- Courses that emphasize mechanics, electricity, heat and light are highly recommended.

Psychology – six semester hours

- One introductory course and one course in human growth and development, or abnormal psychology is required.

Statistics – three semester hours

In order to complete the total requirements, students are encouraged to elect courses from the following categories: computer science, embryology, histology, cell biology, comparative anatomy, kinesiology, exercise physiology, foreign languages and courses in physical education dealing with an analytical approach to human movement or motor learning.

Students must also present a minimum total of 100 volunteer hours in at least two physical therapy practice settings.

Students are required to have current CPR certification. One of the three required letters of recommendation should be from a physical therapist.

### Application deadlines

All applicants to the program are encouraged to submit a completed



application as soon as possible beginning Nov. 1. Acceptance decisions will begin Jan. 1. The final deadline for applications is Feb. 1. All acceptance decisions will be made by April 1.

## Curriculum plan

### First professional year

	credits
<b>Summer semester one</b>	
PHTY 501 Gross Anatomy	7

### Fall semester

PHTY 502 Kinesiology	4
PHTY 506 Functional Neuroanatomy	5
PHTY 510 Rehabilitation I	3
PHTY 512 Professional Aspects of Physical Therapy	2
PHTY 516 Topics in Health Care Services and Delivery	1
PHTY 531 Scientific Inquiry	2
	17

### Spring semester

PHTY 503 Applied Exercise Physiology	3
PHTY 505 Applied Microscopic Anatomy for Physical Therapists	4
PHTY 508 Measurement and Assessment	6
PHTY 537 Rehabilitation II	3
	16

### Summer semester two

PHTY 520 Clinical Education I	4
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### Second professional year

#### Fall semester

PHTY 609 Clinical Biomechanics	3
PHTY 621 Therapeutic Agents	5
PHTY 624 Physical Therapy Seminar I	2
PHTY 626 Life Span Development and Motor Control I	6
PHTY 648 Orthopedic Physical Therapy	5
	21

#### Spring semester

PHTY 615 Pharmacology	1
PHTY 623 Cardiopulmonary Physical Therapy	3
PHTY 627 Life Span Development and Motor Control II	2
PHTY 640 Neurological Physical Therapy	6
PHTY 644 Orthotics and Prosthetics	2
PHTY 646 Clinical Medicine	2
	16

### Summer semester three

PHTY 650 Clinical Education II	8
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### Third professional year

#### Fall semester (block 1 – 8 weeks)

PHTY 651 Professional Issues	2
PHTY 654 Physical Therapy Seminar II	1
PHTY 661 Administration and Management	2
PHTY 670 Clinical Integration	2
PHTY 691 Special Topics (electives)	1
	8

#### Fall semester (block 2 – 8-weeks)

PHTY 680 Clinical Education III	8
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### Spring semester

PHTY 674 Physical Therapy Seminar III	1
PHTY 680 Clinical Education III (continuation; two 8-week clinical internships)	16

Note: The preceding curriculum plan is under continuous review by the faculty. Course content, sequencing and time commitments are subject to change.

## Transitional Track

The Transitional Doctor of Physical Therapy Program is intended for practicing physical therapy clinicians and offers a didactic augmentation of clinicians' professional education to meet current and future expectations for physical therapy practice. Upon successful completion of this postprofessional program of study, students will have knowledge, skills and behaviors at a level consistent with the current professional (entry-level) D.P.T. standards and will be awarded the D.P.T. degree. The t-D.P.T. program will provide practicing therapists with a mechanism to attain degree parity with more-recently trained therapists who hold the professional D.P.T. by addressing the key differences between their professional baccalaureate or master's degree PT education and the current professional D.P.T. degree education. The curriculum is designed for practicing clinicians to complete through part-time, largely distance-based study in one to three years.

## Admission requirements

Applicants must have either a bachelor's or master's degree in physical therapy from an accredited physical therapy program in the U.S. , a current license to practice physical therapy in the U.S. and at least one year of full-time clinical experience. The department will consider applications from foreign-trained physical therapists if all other admission criteria are met and if credentials have been evaluated by the Foreign Credentialing Commission on Physical Therapy and found to be equivalent to those required of physical therapists educated in the U.S.

Applicants for admission to the program must complete an admission packet that includes the VCU Application for Transitional Doctor of Physical Therapy Program as well as supplementary program materials. Admission packets are available by mail or online:

Virginia Commonwealth University  
School of Allied Health Professions  
Department of Physical Therapy  
P.O. Box 980224  
Richmond , Virginia 23298-0224  
[http://www.vcu.edu/pt/acad\\_programs/tDPT](http://www.vcu.edu/pt/acad_programs/tDPT)

Application packets must contain:

- a completed VCU Application for Transitional Doctor of Physical Therapy Program form.
- an official copy of all transcripts of the applicant's undergraduate and/or graduate record indicating that the applicant has completed a degree in physical therapy.
- a copy of the applicant's license to practice physical therapy.
- a completed Clinical Experience Documentation Form.

## Application deadlines

Applications are reviewed on an ongoing basis. Each year, the application deadline for fall enrollment is June 1, and the application deadline for

spring enrollment is Nov. 1.

The applicant is encouraged to check the status of his or her application packet to ensure that all components of the packet have been received. Inquiries should be made to the Department of Physical Therapy. Incomplete packets will not be reviewed.

## Curriculum

The t-DPT program will require 15 to 21 credits. The program must be completed within three years of matriculation. Students will be required to complete:

- 12 credits of core courses comprised of two classes in evidence-based practice, a class in applied exercise physiology, and a class in physical therapy evaluation in the direct access setting.
- three to nine credits of elective course work, depending on matriculation status.
  - For students with a master's degree in physical therapy, a minimum of two elective courses.
  - For all other students, a minimum of four elective courses.

### Required core courses for the t-DPT program

	credits
PHTY 603 Evidence-Based Practice I	3
PHTY 604 Evidence-Based Practice II	4
PHTY 610 Physical Therapy Evaluation in the Direct Assess Setting	2
PHTY 503 Applied Exercise Physiology	3
Total	12

### Elective courses for the t-DPT program

	credits
PHTY 615 Pharmacology	1
PHTY 617 t-DPT Gross Anatomy	3
PHTY 614 Evidence for Neurologic Practice	2
PHTY 613 Evidence for Orthopedic Practice	2
PHTY 616 Evidence for Tissue Healing and Therapeutic Modalities	2
Total	3-9

## Physical Therapy Track in Anatomy Ph.D. program

### Admission requirements summary

#### Physical Therapy Track in Anatomy Ph.D. program

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall	Applications received prior to Jan 7 given priority consideration	B.S., M.S. or D.P.T. in Physical Therapy  Contact Physical Therapy or Anatomy for specific admission requirements

The departments of Anatomy and Neurobiology and Physiology of the School of Medicine, together with the Department of Physical Therapy of the School of Allied Health Professions offers Ph.D. programs in anatomy-physical therapy and physiology-physical therapy. The goals of the doctoral programs are to train students in research and educational skills in preparation for students to function as physical therapy faculty members. Application is made to either the Department of Anatomy and Neurobiology or the Department of Physiology. Acceptance into either of

the programs requires approval by the admission committees of the cooperating departments. **Graduates receive either the Ph.D. in Anatomy or the Ph.D. in Physiology.**

Students in the Anatomy/Physical Therapy Doctoral Program take required courses within the departments of Anatomy and Neurobiology and Physical Therapy. Students in the Physiology/Physical Therapy Program take required courses within the departments of Physiology and Physical Therapy. (Other courses may be required by the students dissertation committee.) In both programs, the student plans and conducts a research study generally under the direction of a faculty member of the Department of Physical Therapy; however, the dissertation adviser may be from either of the two primary departments. In addition, the student is required to assist in teaching three courses.

In addition to the requirements listed above, admission to either the anatomy/physical therapy or physiology/physical therapy programs requires:

- a minimum of a bachelor's degree,
- graduation from an accredited program in physical therapy (or equivalent, if trained outside the United States) and
- demonstrated clinical experience in physical therapy.

Applicants to the physiology/physical therapy program also are encouraged to have completed at least one course in organic chemistry. Applicants should refer to the departmental Web site for more information or contact:

Dr. Sheryl Finucane, Director of Graduate Studies  
Department of Physical Therapy  
School of Allied Health Professions  
Virginia Commonwealth University  
P.O. Box 980224  
Richmond, VA 23298-0224  
Phone: (804) 828-0234

For additional information about the collaborating departments, refer to their Web sites:

- Department of Physical Therapy
- Department of Anatomy and Neurobiology
- Department of Physiology

## Physical Therapy Track in Physiology Ph.D. program

### Admission requirements summary

#### Physical Therapy Track in Physiology Ph.D. program

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall	Applications received prior to Jan 7 given priority consideration	B.S., M.S. or D.P.T. in Physical Therapy Contact Physical Therapy or Anatomy for specific admission requirements

The departments of Anatomy and Neurobiology and Physiology of the School of Medicine, together with the Department of Physical Therapy of the School of Allied Health Professions offers Ph.D. programs in anatomy-physical therapy and physiology-physical therapy. The goals of

the doctoral programs are to train students in research and educational skills in preparation for students to function as physical therapy faculty members. Application is made to either the Department of Anatomy and Neurobiology or the Department of Physiology. Acceptance into either of the programs requires approval by the admission committees of the cooperating departments. **Graduates receive either the Ph.D. in Anatomy or the Ph.D. in Physiology.**

Students in the Anatomy/Physical Therapy Doctoral Program take required courses within the departments of Anatomy and Neurobiology and Physical Therapy. Students in the Physiology/Physical Therapy Program take required courses within the departments of Physiology and Physical Therapy. (Other courses may be required by the students dissertation committee.) In both programs, the student plans and conducts a research study generally under the direction of a faculty member of the Department of Physical Therapy; however, the dissertation adviser may be from either of the two primary departments. In addition, the student is required to assist in teaching three courses.

In addition to the requirements listed above, admission to either the anatomy/physical therapy or physiology/physical therapy programs requires:

- a minimum of a bachelor's degree,
- graduation from an accredited program in physical therapy (or equivalent, if trained outside the United States) and
- demonstrated clinical experience in physical therapy.

Applicants to the physiology/physical therapy program also are encouraged to have completed at least one course in organic chemistry. Applicants should refer to the departmental Web site for more information or contact:

Dr. Sheryl Finucane, Director of Graduate Studies  
Department of Physical Therapy  
School of Allied Health Professions  
Virginia Commonwealth University  
P.O. Box 980224  
Richmond, VA 23298-0224  
Phone: (804) 828-0234

For additional information about the collaborating departments, refer to their Web sites:

- Department of Physical Therapy
- Department of Anatomy and Neurobiology
- Department of Physiology

## Rehabilitation and Movement Science, Doctor of Philosophy (Ph.D.)

### Admission requirements summary

#### Rehabilitation and Movement Science, Doctor of Philosophy (Ph.D.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall preferred	Applications received prior to JanGRE 9 will be given priority consideration	

The Ph.D. in Rehabilitation and Movement Science is an interdisciplinary

degree program developed through a collaborative partnership of the departments of Exercise Science, Physical Therapy, and Physical Medicine and Rehabilitation. The mission of this collaborative degree program is to prepare applied scientists capable of approaching multifaceted health care, preventive medicine and rehabilitation initiatives from an integrative rather than competitive perspective, and to prepare graduates to assume leadership positions in higher education teaching, research and management within rehabilitation and movement science.

There are two program tracks: cardiopulmonary and neuromusculoskeletal dynamics. The cardiopulmonary track prepares individuals to teach, conduct research and direct external funding initiatives in the area of cardiopulmonary rehabilitation and physiology, particularly in areas associated with metabolic and chronic disease states. The neuromusculoskeletal dynamics track prepares individuals for teaching, research and clinical initiatives associated with the identification and rehabilitation of movement disorders.

### Admission requirements

Admission decisions are made by an admissions committee comprised of faculty members from each of the major collaborating departments: Exercise Science, Physical Therapy and Physical Medicine and Rehabilitation. Applicants must have completed at least one of the following: a master's degree in a related area, 30 hours of postbaccalaureate work (e.g. course work at 500 level or greater), or a first professional degree program. Admission decisions are made only on the basis of a completed application packet.

Applicants for admission to the program must complete an admission packet that includes the VCU Application for Graduate Study as well as supplementary program materials. Admission packets are available from:

#### Graduate School

Virginia Commonwealth University  
Moseley House  
P.O. Box 843051  
Richmond, VA 23284-3051  
(804) 828-6916  
<http://www.vcu.edu/graduate>

or

#### Office of Doctoral Studies

Virginia Commonwealth University  
P.O. Box 842020  
Richmond, VA 23284-2020  
(804) 827-2657  
<http://www.soe.vcu.edu>

The entrance requirements fall into the following three categories. All criteria must be completed for consideration for admission.

#### Academic criteria

- A completed VCU Graduate School Application.
- Two official and up-to-date copies of all transcripts of the applicant's undergraduate and graduate record indicating that the applicant has completed the minimum required prerequisite course work.
- Official and current scores (within the past five years) for the general test of the GRE. Older scores may be submitted and consideration will be based upon the time elapsed since last formal schooling, occupation success and research ability.

- Priority for admission will be given to the applicants who have attained at least 3.5 in all graduate work attempted and a combined verbal and quantitative score on the GRE of a minimum of 1,000. If the TOEFL is required, a minimum of 600 is expected (250 on the computer-based test).

#### External criteria

- A professional resume indicating an applicant's educational and career experience as well as evidence of research potential.
- Completed reference forms from three individuals capable of evaluating the applicant's academic and research potential.

#### Written expression

- A personal statement in which the applicant discusses his or her personal career goals and the manner in which this doctoral program would enhance those goals.
- A summary of motivation, education and aims in pursuing an interdisciplinary degree in rehabilitation and movement science.

Applicants being considered for admission must complete an interview with a Ph.D. admissions committee representative and/or research faculty member with whom the student would like to work.

The applicant is encouraged to check the status of his or her application packet to ensure that all components of the packet have been received. Inquiries should be made to the Office of Doctoral Studies. The Admissions Committee will not review incomplete packets.

#### Transfer credit

Students in the program may transfer up to nine credit hours into the program, including courses taken at VCU prior to being admitted to the program. Note that credits earned for one degree cannot be applied to another degree.

#### Curriculum

The Ph.D. in Rehabilitation and Movement Science will require a minimum of 36 credit hours of course work and 12 credit hours of dissertation research. Students will be required to complete:

- 12 credit hours of research core courses comprised of a research design class, two classes in statistical application and an elective in the area of research design or statistics;
- 18 credit hours in a concentration comprised of a focus on course work in a specific discipline formulated with the major adviser and approved by the Admissions Committee of the degree program;
- three credit hours comprised of laboratory rotations in a minimum of two laboratories within the Rehabilitation and Movement Science program; each credit hour requires a minimum of 50 contact hours in the laboratory selected;
- three credit hours of professional development comprised of an interdisciplinary research/journal club seminar (one credit hour), a teaching practicum (one credit hour) and a presentation delivered at a regional, national or international conference of a related discipline (one credit hour);

- 12 credit hours of dissertation research comprised of a focused line of research over a three-to-four-year period of doctoral work.

Required research courses for the program (nine credit hours) – both tracks:

	credits
STAT 543 Statistical Methods I	3
STAT 544 Statistical Methods II	3
ALHP 761 Health Related Sciences Research Design (or other approved course in research design)	3
Approved research design alternatives:	
HADM 761 Health Services Research Methods I	3
SOCY 602 Applications of Advanced Research Methods	3
EDUS 710 Educational Research Design	3

Elective research courses for the program (three credit hours) – both tracks:

	credits
BIOS 531 Clinical Epidemiology	3
BIOS 553-554 Applied Statistics	3
BIOS 571 Clinical Trials	3
BIOS 572 Statistical Analysis of Biomedical Data	3
BIOS 655 Quantitative Epidemiology	3
ALHP 716 Grant Writing and Project Management in Health Related Sciences (or elective research course in consultation with adviser)	3

Required concentration courses for the Ph.D. program tracks

	credits
<b>Cardiopulmonary track</b>	
PHIS 512 Cardiovascular Exercise Physiology	3
PHIS 604 Cell Physiology	4
PHIS 612 Cardiovascular Physiology	3
REMS/HEMS 601 Movement Physiology	3
REMS/HEMS 610 Laboratory Techniques in Rehabilitation and Movement Science	3
REMS/HEMS 675 Clinical Exercise Physiology	3
	19

#### Neuromusculoskeletal dynamics track

(select 18 credits from the following):

REMS/HEMS 611 Biomechanics of Human Motion	3
REMS/HEMS 660 Neuromuscular Performance	3
REMS 665 Instrumentation in Motion Analysis	3
PHTY 602 Advanced Biomechanics	3
PHTY 605 Foundations of Pathokinesiology	3
PHTY 606 Therapeutic Kinesiology	3
PHTY 608 Advanced Musculoskeletal Sciences	3
REMS/HEMS 692 Independent Study or elective course	3

#### Laboratory rotations (three credit hours) – both tracks:

REMS 710 Research Techniques in Rehabilitation and Movement Science	1-3
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#### Professional development core (three credit hours) – both tracks

REMS 690 Research Seminar in Rehabilitation and Movement Science	1
REMS 793 Teaching Practicum in Higher Education	1
REMS 794 Research Presentation Seminar	1

#### Research in rehabilitation and movement science (12 credit hours) – both tracks

REMS 798 Research in Rehabilitation and Movement Science	12
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## Advisory committee

### Adviser

Incoming students will identify a faculty member in the program with whom they would like to pursue their academic program and research endeavors. Every effort will be made to accommodate the student's first choice of a faculty adviser. If the student is unsure of a research interest and adviser selection, the Admissions Committee will assign an adviser. Within the first two semesters of attendance, a permanent adviser should be identified. The adviser, together with the student, will develop a plan of study for the student's didactic and scholarly program and will be responsible for guiding the student's academic progress such that the adviser will supervise the student's research work and dissertation preparation.

### Advisory committee

The student, in consultation with the adviser, will identify faculty members to serve on the advisory committee. The committee shall be appointed no later than the end of the spring semester following matriculation into the program. The student's advisory committee shall be comprised of five faculty members to include the adviser, two members from the rehabilitation and movement science faculty and two faculty members from other related departments. The student's adviser, who is active in the field of research the student has selected, will chair the committee.

## Comprehensive examination

Once core courses are successfully completed, students must pass written and oral comprehensive examinations before transitioning to candidacy. These examinations will test students on their basic knowledge of rehabilitation and movement science principles (primarily in their chosen track) and research methods as obtained through core, research and elective courses of the curriculum. The student must demonstrate a firm grasp of the material and the potential to become an independent researcher.

The written exam will be given to students during their second spring semester in the program. The written exam will consist of an area paper pertinent to the student's area of interest. The student's adviser and advisory committee must approve the topic and an outline of the area paper. The student's adviser is responsible for grading the area paper. If a student receives a less than satisfactory grade on the area paper, he/she will be afforded the opportunity to make appropriate revisions. Students will only be allowed to revise the area paper once. The area paper should be a minimum of 15 double-spaced pages in 12-point font. The area paper must be in a form suitable for submission for publication to a journal whose content addresses topics consistent with the area paper. The student's adviser and advisory committee must approve the journal selection and manuscript prior to submission. A passing grade on the written exam is not contingent upon the manuscript being accepted for publication.

Following acceptance of the area paper, the student will write a research proposal. The structure of the proposal will follow federal grant submission guidelines such as those specified by the National Institutes of Health or the Centers for Disease Control. The analytical research proposal must be submitted to and approved by the student's advisory committee prior to the oral examination.

The oral exam should be conducted within three to six months of successful completion of the written exam with the goal of proceeding to candidacy by the end of the fall semester of the student's third year. The oral exam will be based on, but not primarily limited to, the student's proposed analytical research project. The student must receive a satisfactory grade from each committee member to pass the oral exam.

The student may proceed to candidacy and begin the research outline in the proposal once successful completion of the oral examination is achieved.

## Exit requirements

### Dissertation defense

Upon completion of all required course work and the research project, the student must prepare a dissertation to describe the research. A dissertation manual is available for download from the VCU Web site. Students are highly encouraged to become familiar with this manual and use it as a guide for preparation of their dissertation. All committee members must approve the written dissertation and the student must orally defend this dissertation in a publicly advertised seminar prior to graduation.

Students are expected to meet all university graduate school requirements regarding minimal GPA and limitation on credits achieved with a grade of "C" or below.

### Time to degree

The doctoral degree must be obtained within seven years of matriculation. It is expected that full-time students will satisfy all requirements within four to five years. Part-time students may take the full seven years to complete all courses and the research project.

## Department of Rehabilitation Counseling

Founded in 1955, the Department of Rehabilitation Counseling serves as a national leader in the professional preparation of certified rehabilitation counselors who exercise skill and competence on a high ethical level and with personal integrity. Accessible, innovative, research-based educational experiences that encourage the use of a critical and exploratory attitude are emphasized. The department seeks to perpetuate active programs of research and service, and maintain high levels of teaching competence. In partnership with students, community agencies and consumer and professional organizations, the department endeavors to advance the personal, social and economic independence of individuals with disabilities.

The Department of Rehabilitation Counseling is fully accredited by the Council on Rehabilitation Education (CORE), and is the only such program in the commonwealth of Virginia. The purpose of accreditation is to promote the effective delivery of rehabilitation services to people with disabilities by fostering ongoing review and improvements of rehabilitation education programs. CORE has developed a field-based research accreditation process that has gained widespread acceptance in the professional accreditation movement. With over 2,000 alumni, the department also enjoys solid relationships with many community organizations that serve as excellent sites for clinical training.

### Administration

#### Robert L. Clifton

Professor and Acting Department Chair

#### Amy J. Armstrong

Program Coordinator

### Faculty adviser

Every student must have a faculty adviser to guide the student regarding course selection and scheduling, to supervise his/her research and to act

as a channel of communication with the department, to other departments, and to the Graduate School. When the student receives notification of admission to the department, it is his/her responsibility to contact the faculty adviser to plan the program of study. Students consult with faculty advisers on a regular basis to ensure orderly progress through the entire program of study, choose clinical placement sites, select electives and plan their careers.

## Professional Counseling, Certificate in (Post-master's certificate)

### Admission requirements summary

#### Professional Counseling, Certificate in (Post-master's certificate)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Post-master's certificate	Fall	Aug 1	
	Spring	Dec 1	
	Summer	May 1	

The advanced certificate program in professional counseling is designed for persons who hold the Master of Science or Master of Arts degree in counseling from VCU or other institutions. The intent is to assist students in meeting the educational requirements for the Licensed Professional Counselor, the Licensed Substance Abuse Practitioner and the Certified Substance Abuse Counselor credentials in Virginia and other states. The certificate program also may be pursued to fulfill preservice or continuing education requirements for various national certifications, such as National Certified Counselor or Certified Rehabilitation Counselor. Applicants to the program designate a preferred specialization based upon interest and need. Specialization requirements may exceed the minimum number of required credits for the certificate program as a whole.

Specific goals include but are not limited to:

1. The encouragement of advanced graduate education in counseling.
2. The facilitation of the professional counselor's career development efforts and goals.
3. The facilitation of the acquisition or maintenance of professional state licenses or national certificates.
4. The expansion of the student's awareness and expertise in specialized counselor roles and functions.

### Admission requirements

The applicant must:

1. Have completed a master's degree in counseling.
2. Submit an application to the VCU Graduate School, including a statement of goals and three letters of reference.
3. Complete a personal interview with a faculty member from the Department of Rehabilitation Counseling.

While not a requirement for admission, applicants who are seeking licensure or certification in the commonwealth of Virginia are strongly encouraged to have their graduate transcripts evaluated by the Virginia Board of Counseling for official verification of holding a degree in counseling. The board also will determine the number of hours completed toward satisfying the 60 graduate credit hours requirement.

### To apply

Applicants for admission to the program must complete forms provided by the Graduate School indicating "Certificate in Professional Counseling" as the curriculum and designate a preferred specialization or interest area. Detailed information on the curriculum is available from:

Virginia Commonwealth University  
Department of Rehabilitation Counseling  
McGuire Hall  
1112 E. Clay St.  
P.O. Box 980330  
Richmond, VA 23298-0330  
(804) 828-1132  
Fax: (804) 828-1321

Completed applications must be addressed to:

Virginia Commonwealth University  
Graduate School  
1001 Grove Ave.  
P.O. Box 843051  
Richmond, VA 23284-3051

### Graduation requirements

To qualify for the advanced certificate in professional counseling, the following requirements must be satisfied:

1. With an academic adviser, design and complete an approved course of study that leads to the completion of the educational requirements for licensure or certification as a professional counselor.
2. Complete a minimum of 15 graduate hours of course work in professional counseling with an overall GPA of 3.0 or higher.
3. Complete six of 15 hours of graduate course work in advanced counseling skills courses.
4. The 15 credits must be nonduplicative of previous graduate work completed at VCU or other institutions.
5. Transfer credits are not accepted.

### Concentration areas

Two concentration areas are available in the certificate program as follows:

- Professional counseling, which requires a minimum of six credits in advanced counseling skills course work in the RHAB 613-614 series consisting of skills development in cognitive/behavioral counseling, motivational enhancement therapy, Gestalt therapy and others.
- Substance abuse counseling, which requires the completion of RHAB 521 Foundations of Substance Abuse Rehabilitation, RHAB 522 Clinical Evaluation, Assessment, and Treatment Planning in Substance Abuse Rehabilitation and RHAB 523 Contemporary Issues in Substance Abuse Treatment and Recovery. For persons who have not completed a practicum experience, RHAB 695 Supervised Clinical Experience is required.

Advanced supervised clinical practice within the above concentrations also can be arranged for internship and practicum experience in the student's area of specialization.

## Additional information

The program and all RHAB courses are taught from a rehabilitation counseling perspective. While course work from other departments such as Psychology, Social Work and Counselor Education may be included in the course of study, emphasis is placed upon a rehabilitation philosophical approach.

It also is important that applicants understand that no guarantee can be provided by VCU that a particular licensing or certification body will accept the courses listed in fulfillment of certificate requirements. Credentialing bodies are numerous, their requirements are in flux and they are not always consistently applied to individual applicants. In advising students, the faculty advisers make good faith efforts to interpret educational requirements with students. However, the student is ultimately responsible for verifying the appropriateness of any course with the specific credentialing body involved.

## Rehabilitation Counseling, Master of Science (M.S.)

### Admission requirements summary

#### Rehabilitation Counseling, Master of Science (M.S.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.	Fall	Aug 1	GRE or MAT
	Spring	Dec 1	
	Summer	May 1	

Graduates from accredited rehabilitation counseling programs are typically trained in counseling theory and techniques; individual, group and environmental assessment; psychosocial and medical aspects of disability; human development; cultural diversity; principles of psychiatric rehabilitation, case management and rehabilitation planning; issues and ethics in rehabilitation service delivery; technological adaptation; vocational evaluation and work adjustment; career counseling; implementation of the Americans with Disabilities Act; job development; and placement.

### Degree requirements

The minimum degree requirement is 48 graduate credits including 33 credits of didactic course work, 100 hours of fieldwork, 600 hours of internship, six credits of electives, and a comprehensive examination.

The on-campus Master of Science in Rehabilitation Counseling degree has been available since 1955. The program consists of 48 graduate credits. Currently, 90 full- and part-time graduate students are enrolled on campus. In addition, the same degree has been made available on a distance-learning basis since July 1999. Ten required courses and the two electives are available online according to a predetermined schedule. Two clinical counseling courses also are available on-site in a compressed schedule (typically one-to-two weeks) at various locations. Alternately, up to 12 hours may be taken at an accredited graduate counseling program and accepted as transfer credit with prior approval. Approved internships with appropriate faculty and agency supervision are negotiated by the department, student and the local community organization.

Example of a full-time program of study

	credits
<b>Semester I</b>	
RHAB 525 Introduction to Rehabilitation	3
RHAB 611 Counseling Theories in Rehabilitation	3
RHAB 625 Research in Rehabilitation	3

RHAB 640 Medical and Psychological Aspects of Disabilities in Rehabilitation	3
	12
<b>Semester II</b>	
RHAB 612 Group Counseling Theories and Techniques in Rehabilitation	3
RHAB 521 Foundations of Substance Abuse Rehabilitation	3
RHAB 623 Career Counseling and Job Placement in Rehabilitation	3
RHAB 642 Psychiatric Information for Counselors in Rehabilitation	3
	12
<b>Summer</b>	
Elective	3
	3
<b>Semester III</b>	
RHAB 633 Case Management in Rehabilitation	3
RHAB 624 Appraisal and Evaluation in Rehabilitation	3
RHAB 654 Multicultural Counseling in Rehabilitation	3
RHAB 691 Counseling Techniques in Rehabilitation	3
	15
<b>Semester IV</b>	
Elective	3
RHAB 695 or RHAB 696 Supervised Clinical Practice (includes 600 hours of internship and CRC/comprehensive examination)	6
	9

### Comprehensive examination

All students are required to complete the Certified Rehabilitation Counselor (CRC) Examination in conjunction with RHAB 695 or 696.

### Specializations

In collaboration with the faculty adviser, students may wish to design a program of study around a specific area of interest. Specializations in substance abuse, mental health, physical/sensory disabilities and gerontology are the most common in the department. Careful planning will typically allow students to meet the educational requirements for several additional credentials beyond the Certified Rehabilitation Counselor (CRC); e.g., Licensed Professional Counselor (LPC), National Certified Counselor, Certified Mental Health Counselor, Certified Case Manager, Certified Vocational Evaluator, Certified Disability Management Specialist, Rehabilitation Provider (Virginia), or Master Addictions Counselor. Specialization is achieved through:

- customization of assignments in required courses such as RHAB 640, RHAB 633, RHAB 691 or RHAB 654. These courses often involve assignments that require the student to specify a population of interest that the student is free to select.),
- required courses specific to your population of interest (e.g., RHAB 521),
- careful selection of elective course work (e.g., RHAB 522, RHAB 523, RHAB 533),
- careful selection of a 600-hour internship site and supervisor (RHAB 695-696), and
- additional elective course work beyond the required 48 credits.

### Foundations of clinical training



According to CORE Standards and the requirements of the department, students must have supervised rehabilitation counseling fieldwork and internship experiences that include:

- a minimum of 100 clock hours of fieldwork experience (as part of RHAB 691),
- a minimum of 600 clock hours of internship experience in rehabilitation settings (as part of RHAB 695-696),
- written expectations and procedures for these experiences that are distributed to students and agency supervisors,
- the following activities: orientation to program components, policies and procedures; introduction to staff and their roles and functions; identification of the expectations for students; observation of all aspects of the delivery of rehabilitation counseling services; work assignments performing the tasks required of an employed rehabilitation counselor in a rehabilitation setting from intake to discharge and/or placement; reporting, including all required academic reports as well as logs, weekly progress reviews and summaries of activities, and
- evaluation of student performance by the agency supervisor and the faculty supervisor, and including self-evaluation by the student.

Internship experiences shall be carried out under the regularly scheduled supervision of a CRC. The quality of supervision shall be maintained by involvement of VCU faculty in terms of in-service training, consultation, information and the provision of professional development resources to agency supervisors.

## Colloquia and grand rounds

Periodically, special colloquia, grand rounds, workshops and institutes are offered for department students and agency personnel. Students will receive reasonable notice of these events, and some may be required for specific classes. Students should make every effort to attend because these experiences significantly enrich the curriculum.

## Time limit for completion of degree

All degree requirements must be met within seven years from the date of initial enrollment.

### Combined Certificate in Aging Studies (Postbaccalaureate graduate certificate) and Master of Science in Rehabilitation Counseling (M.S.)

The Department of Rehabilitation Counseling, in cooperation with the Department of Gerontology, provides its degree-seeking students with the opportunity to earn the Certificate in Aging Studies while concurrently completing the requirements for the Master of Science in Rehabilitation Counseling. Students must meet admission requirements for both the rehabilitation degree and the gerontology certificate program, and admission into one is independent of the other. Additional information, including the specific program of study for the counseling program, may be obtained in the Department of Rehabilitation Counseling. Information on the curriculum presented by the Department of Gerontology can be obtained by contacting the chair of the Department of Gerontology.

#### Admission deadlines and requirements

Both full- and part-time students are valued and are welcome to apply. Applications are reviewed on an ongoing basis. To be considered, all pertinent materials must be received in the department by Aug. 1 (for fall), Dec. 1 (for spring) or May 1 (for summer). Admission requirements include:

- an undergraduate GPA of 2.7 on a 4.0 scale; or 2.7 in the last 60 semester hour credits (Based upon transcripts provided to the Graduate School),
- three positive letters of reference from professors or employers (on reference forms provided by the Graduate School),
- satisfactory performance on either the GRE (804) 828-6916 or the MAT (804) 828-1193,
- a relevant and clear statement of goals for graduate study and career,
- statement of previous work or volunteer experience, and
- a personal interview with a faculty member may be required.

A complete set of application materials is available from the department office at (804) 828-1132.

#### Transfer credit

A maximum of 13 hours of graduate credit may be transferred from another VCU graduate program or outside institution if not applied previously to another degree. Transfer credits must carry a grade of "B" or higher from an accredited institution. Acceptance of transfer credit is made at the level of the department chair and dean of the School of Allied Health Professions. Transfer credits earned as a nondegree-seeking graduate student are limited to six semester hours of credit. Credits earned as deficiency hours or to demonstrate the ability to compete at the graduate level, though transferable, may not be applied to the 48-credit program of study.

#### Curriculum

In addition to the requirements for the Master of Science in Rehabilitation Counseling, the certificate program requires the completion of 15 credits in gerontology and six credits in rehabilitation counseling.

	credits
GRTY 601 Biological/Physiological Aging	3
GRTY 602 Psychology of Aging	3
GRTY 605 Social Gerontology	3
GRTY 615 Aging and Mental Disorders or GRTY 641 Psychological Assessment and Treatment	3
GRTY 692 Independent Study in Gerontology	3
RHAB 625 Research in Rehabilitation	3
RHAB 696 Supervised Clinical Practice in Rehabilitation Counseling	3

21

## Program in Patient Counseling

Patient counseling is the practice of communicating empathic concern, support and sensitive spiritual counsel to the physically or emotionally troubled person in the traumas of life. There is a long history of a concerted effort toward this end at the VCU Health System. With the appointment of Dr. George D. Ossman as chaplain in 1943, the administration gave clear evidence of its awareness of the need for a specialized caring ministry to hospitalized patients and their families.

The chaplaincy program was significantly expanded in 1958 and was accredited to begin the education and clinical training of persons in patient counseling. Since then, a continuous program has been in existence and has evolved into the present program in patient counseling. Patient counseling, as it exists today, became an integrated program in the School of Allied Health Professions in 1970. A comprehensive curriculum review was completed in 1999.

With the rapid growth of health care and the increasingly complex problems of medical ethics and viable delivery systems, it is very important to educate qualified persons to deal with the human dimensions of illness as well as the personal and family stressors related to it. Through this program, VCU has an opportunity to make an impact upon health care education by emphasizing the spiritual dimension of human needs in life crises. By so doing, this university has a significant role to play in the important task of keeping health care holistic and utilizing technical and scientific methodology in the context of a deep respect for the total life of persons.

## Accreditation

The program is accredited by the Association for Clinical Pastoral Education, Incorporated. It is offered in collaboration with the VCU Health System.

## Administration

### Alexander F. Tartaglia

Associate Professor and Program Chair

## Objectives

The Program in Patient Counseling is designed to assist an individual to work in the health field as one skilled in dealing with the whole person in the context of life's crises and in a cooperative interprofessional team approach. It is offered to persons who have an existing identity in a helping or counseling profession. This includes clergy, social workers, institutional counselors, education specialists, psychologists, community health workers and others in the health care professions.

## Facilities

West Hospital (N2S) is the base for the educational program, and limited space is available in clinical areas to work with persons and families in crisis. The Main Hospital, mezzanine level, contains the chapel, family consultation room and administrative offices.

## Code of ethics

The professional behavior of the student is expected to be in accordance with the Code of Professional Ethics, as adopted by the Association for Clinical Pastoral Education, Inc. and the Code of Ethics of the Association of Professional Chaplains.

## Programs

Students serve in the dual capacity of providing pastoral care service while learning. Extensive clinical involvement, including night and weekend responsibilities, is required for selected courses and clinical pastoral education credit. Each student receives individual supervision by a member of the faculty.

- [Intern Certificate](#)
- [Postbaccalaureate Graduate Certificate in Patient Counseling](#)
- [Master of Science in Patient Counseling](#)

Students who are unsuccessful in demonstrating completion of designated clinical pastoral education outcomes in any program will be required to develop with a faculty mentor an individualized plan of study toward their completion. Typically, this plan will be accomplished through additional course work or a directed independent study.

## Continuation requirements, advising, transfer and part-time status

A student must maintain a minimum GPA of 3.0 in all course work completed at VCU. A student who falls below that minimum will have one semester to remedy the deficiency.

A student must register for at least one credit hour each academic year for continuation in the program. Any student who fails to register must have prior approval to do so or be dropped from the program and must reapply for reinstatement.

There is a five calendar-year maximum for students to complete the Master of Science degree and a seven calendar-year maximum for the dual degree. The graduate certificate program must be completed within a four calendar-year maximum. Part-time students who wish to accumulate concurrent ACPE credit need to be sure that course work is completed in accordance with ACPE standards.

A maximum of eight credits may be transferred from another university toward the Master of Science course requirements provided these credits have not been applied to a previous degree. A maximum of one-third of the didactic hours may be transferred from another VCU program. Dual degree candidates may apply six credits from their seminary studies to the VCU degree. Transfer is given at the discretion of the chair after consultation with the faculty, subject to university approval. Credits are not transferable to either of the certificate programs.

Students who have been admitted to the graduate certificate program may be admitted to the master of science degree with advanced standing after the completion of at least 18 credits with a "B" or better. All credits of a "B" or better will transfer to the degree program.

Upon admission to all programs students will be assigned a faculty adviser.

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## Patient Counseling, Certificate in (Post-baccalaureate graduate certificate)

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### Admission requirements summary

#### Patient Counseling, Certificate in (Post-baccalaureate graduate certificate)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Certificate	Fall, spring and summer	Contact the department	

#### Special requirements:

Contact the department for specific admission requirements.

The graduate certificate requires the completion of 27 credit hours of study according to one of the established curricula. Course substitutions require faculty approval.

### Admission requirements

- Bachelor of Arts or its equivalent;
- a graduate degree in a health-related field or two years of graduate

theological education;

- completed VCU graduate application;
- supplemental ACPE application materials;
- demonstrated completion of Level I Clinical Pastoral Education; and
- personal interview with the faculty.

## Curriculum

		credits	
		summer	fall
Year I			
PATC 555 Theory and Practice of Patient Counseling - I	-	5	-
PATC 561 Group Process I	-	2	-
Elective	-	2	-
PATC 556 Theory and Practice of Patient Counseling - II	-	-	5
PATC 562 Group Process II	-	-	2
Elective	-	-	2
Year II			
PATC 609 Supervised Clinical Practice I	5	-	-
PATC 601 Theory of Group Leadership	2	-	-
PATC 639 Pastoral Care Management	2	-	-

## Patient Counseling, Intern Certificate in

### Admission requirements summary

#### Patient Counseling, Intern Certificate in

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Certificate	Fall, spring and summer	Contact the department	
<b>Special requirements:</b> Contact department for specific admission requirements.			

The Intern Certificate is designed to meet the outcomes of Level I Clinical Pastoral Education. This certificate is granted upon the satisfactory completion of PATC 515 or an approved equivalency of courses completed in no more than two consecutive semesters. Programs are offered in the fall, spring and summer semesters.

### Admission requirements

- Bachelor of Arts or its equivalent;
- completed VCU graduate application;
- supplemental ACPE application materials; and
- personal interview with a member of the faculty or an approved substitute.

## Curriculum

	credits
PATC 515 Basic Patient Counseling	9

## Patient Counseling, Master of Science (M.S.)

### Admission requirements summary

#### Patient Counseling, Master of Science (M.S.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.	Fall preferred	Contact the department	GRE
<b>Special requirements:</b> Contact the department for specific admission requirements.			

The Master of Science requires 44 credit hours of study according to one of the established curricula. Course substitutions require faculty approval.

Final granting of the Master of Science requires an oral review with the faculty demonstrating completion of outcomes for Level II Clinical Pastoral Education or Supervisory Clinical Pastoral Education as determined by the chosen track of study.

### Admission requirements

- Bachelor of Arts or its equivalent;
- completed graduate application;
- supplemental ACPE application materials;
- submission of the Graduate Record Examination or at least one year of graduate education with a GPA of "B" or better; and
- personal interview with faculty.

International students should submit scores at an acceptable level (minimum of 550) on the TOEFL and give additional evidence of ability to communicate in English with faculty for admission to the graduate certificate and Master of Science programs.

Students seeking concurrent positions as pastoral care residents at the VCU Health System should contact the department directly. Applicants for resident positions should have completed two years of graduate theological education or a graduate degree in a health-related field with demonstrated background in theological studies and Level I Clinical Pastoral Education in an ACPE accredited center.

## Curriculum

	summer	credits fall	spring
Option I: Dual degree track			
Year I			
M.Div. course taken at seminary	-	-	-
PATC 501 Introduction to Health Care Ministry	-	1	-
M.Div. course taken at seminary	-	-	-
Pastoral care (seminary course)	-	-	-
Year II			
PATC 515 Basic Patient Counseling	9	-	-
M.Div. course taken at seminary	-	-	-
Ethics (seminary course)	-	-	-
M.Div. course taken at seminary	-	-	-
Year III			
M.Div. course taken at seminary	-	-	-
PATC 555 Theory and Practice of Patient Counseling I	-	5	-
PATC 561 Group Process I	-	2	-
PATC 635 Clinical Ethics	-	2	-
PATC 556 Theory and Practice of Patient Counseling II	-	-	5
PATC 562 Group Process II	-	-	2
Elective (taken at VCU)	-	-	2

<b>Year IV</b>				Electives (610, courses in 620 and 630 series, Rehabilitation Counseling or Gerontology)			
PATC 609 Supervised Clinical Practice I	5	-	-	-	-	-	9
PATC 601 Theory of Group Leadership	2	-	-				
PATC 639 Pastoral Care Management	2	-	-				
M.Div. course taken at seminary	-	-	-				
PATC 619 (VCU course at seminary)	-	1	-				
M.Div. course taken at seminary	-	-	-				
<b>Option II: Chaplain certification degree track</b>				<b>Option III: Supervisory CPE degree track</b>			
<b>Year I</b>				<b>Year I</b>			
PATC 555 Theory and Practice of Patient Counseling I	-	5	-	PATC 653 Patient Counseling Evaluation I-	4	-	
PATC 561 Group Process I	-	2	-	PATC 601 Theory of Group Leadership	-	2	-
PATC 635 Clinical Ethics	-	2	-	PATC 661 History of Pastoral Supervision	-	3	-
PATC 556 Theory and Practice of Patient Counseling II	-	-	5	PATC 654 Patient Counseling Evaluation II	-	-	4
PATC 562 Group Process II	-	-	2	PATC 663 Theory of Pastoral Supervision I	-	-	3
Elective	-	-	2	Elective (665, 692 or 697 for those still in certification process)	-	-	2
<b>Year II</b>				<b>Year II</b>			
PATC 609 Supervised Clinical Practice I	5	-	-	PATC 694 Advanced Clinical Pastoral Supervision	7	-	-
PATC 601 Theory of Group Leadership	2	-	-	PATC 664 Theory of Pastoral Supervision II	-	-	-
PATC 639 Pastoral Care Management	2	-	-	PATC 696 Intensive Supervisory Practicum	-	9	-
Electives (610, courses in 620 and 630 series, Rehabilitation Counseling or Gerontology)	-	9	-	Electives (665, 692 or 696 for those still in certification process)	-	-	9

# School of the Arts

The graduate program in the School of the Arts offers advanced degrees in the following areas of study:

#### **Doctor of Philosophy**

art history

#### **Master of Arts in Art History**

architectural history  
historical studies  
museum studies

#### **Master of Art Education**

art education

#### **Master of Fine Arts in Design**

interior environments  
visual communications

#### **Master of Fine Arts in Fine Arts**

ceramics  
fibers  
furniture design  
glassworking  
jewelry/metalworking  
painting  
photography and film  
printmaking  
sculpture

#### **Master of Fine Arts in Theatre**

costume design  
scene design  
theatre pedagogy  
    acting  
    directing  
    dramatic literature  
    physical acting/stage combat  
    voice and speech

#### **Master of Music**

composition (admissions suspended)  
music education  
performance, including conducting

#### **Administration**

325 N. Harrison St.  
P.O. Box 842519  
Richmond, VA 23284-2519  
(804) 828-2787  
Fax (804) 828-6469  
<http://www.vcu.edu/artweb>

#### **Richard E. Toscan**

Dean

#### **Joseph H. Seipel**

Senior Associate Dean for Academic Affairs and Director of Graduate Studies

#### **John DeMao**

Associate Dean for VCU-Qatar

#### **Nancy M. Scott**

Associate Dean for Academic Administration

#### **Susan K. Roth**

Associate Dean for Academic Affairs

#### **Christopher Burnside**

Assistant Dean for Student Affairs

#### **W. Camden Whitehead**

Assistant Dean for Admissions

#### **Accreditation**

The School of the Arts is accredited by the National Association of Schools of Art and Design, the National Association of Schools of Music and the National Association of Schools of Theatre.

Art Education (bachelor's and master's degrees)  
National Association of Schools of Art and Design, National Council for Accreditation for Teacher Education, and Virginia Department of Education

Arts (all visual arts degrees)  
National Association of Schools of Art and Design

Applied Music (bachelor's and master's degrees)  
National Association of Schools of Music

Dance/Choreography (bachelor's degree)  
National Association of Schools of Dance

Interior Design (bachelor's degree)  
National Association of Schools of Art and Design/Foundation for Interior Design Education Research

Music Composition (master's degree)  
National Association of Schools of Music

Music Education (bachelor's and master's degrees)  
National Association of Schools of Music, National Council for Accreditation for Teacher Education and Virginia Department of Education

Music History (master's degree)  
National Association of Schools of Music

Theatre (bachelor's and master's degrees)  
National Association of Schools of Theatre

Theatre Education (bachelor's degree)  
National Association of Schools of Theatre, National Council for Accreditation for Teacher Education and Virginia Department of Education

Anderson Gallery  
National Association of Schools of Art and Design

#### **Admission**

#### **Admission procedures**

Application forms and instructions for applying to all graduate programs in the School of the Arts are available on the School of the Arts Web site at <http://www.vcu.edu/artweb>.

General information about admission to graduate study and application procedures can be found in the [Graduate Studies at VCU](#) section of this bulletin or on the [Graduate School Web site](#).

#### **Admission requirements**

For Ph.D. degree, see Ph.D. in Art History section.

For all other degrees (M.A., M.A.E., M.F.A. and M.M.):

- applicants should hold the baccalaureate degree from an accredited institution
- it is expected that applicants will have a 3.0 ("B") average on the last 60 semester hours of undergraduate work

The prospective student should consult the appropriate section of this bulletin for additional admission requirements for a particular degree program. Such requirements include:

- the Graduate Record Examination (GRE) for applicants to art history
- an audition and examination for applicants for music, as described in the program description for the M.M. degree
- an audition or presentation of portfolio, as well as a personal interview, for applicants for the M.F.A. in theatre
- a portfolio review for all applicants to the visual arts M.F.A. Degrees (a personal interview is encouraged)

## Graduate student status

The School of the Arts recognizes two categories of graduate students. The first is comprised of those who are accepted either provisionally or as students with full standing into the graduate degree programs of the various departmental areas. These students may matriculate full time or part time except for the residence limitation discussed elsewhere in this bulletin.

The second category is that of the nondegree-seeking graduate student, or "special" graduate student. There are two types of "special" graduate students. The first is the student whose expectation of eventual acceptance into a graduate program is high and who wants to begin graduate work while application materials are being completed and processed.

Holders of the baccalaureate degree from recognized institutions may enroll in graduate courses as nondegree-seeking special graduate students, but such courses are not applicable toward a graduate degree from this institution unless the student is accepted into a graduate degree program prior to the conclusion of the semester in which the student registered as a nondegree-seeking graduate student.

A nondegree-seeking student who is later admitted as a degree-seeking student will not be allowed to apply toward a degree more than six credits earned as a nondegree-seeking student.

The second type of nondegree-seeking graduate student is the student who holds a baccalaureate degree, who wishes to take graduate courses for personal enrichment, and who does not intend to work toward a graduate degree. There is no limit to the number of credits that students in this category may take, as long as the academic performance is credible.

**All nondegree-seeking ("special") graduate students must have written permission from the chair of the appropriate department in order to enroll in classes.**

## Registration

Graduate art students are urged to plan their schedules and register during advance registration. Registration materials for students accepted into advanced degree programs are available in the department during the advance registration and registration periods. The advantage of advance registration is that of securing places in classes before they are closed and of obtaining proper counsel from advisers. All graduate students must see their assigned advisers for schedule planning and signature approval. New nondegree-seeking graduate students, or those contemplating registration as such, must secure written permission to register from the departmental

chair.

## Continuous enrollment policy for graduate students

Graduate students in the School of the Arts must observe the University Continuous Enrollment Policy as explained in the Graduate Studies at VCU chapter of this bulletin.

Candidates for all advanced degree programs, after completing all formal course work, must register for at least one semester hour of credit each semester, except summer, until the culminating graduate project (dissertation, thesis, creative project, exhibition, recital, etc.) is completed and the student is ready to graduate. Also, if candidates intend to graduate in August, they must be enrolled for at least one semester hour in the summer session.

## Transfer credit

A maximum of nine graduate credits may be transferred from other accredited institutions and applied to any of the graduate degree programs in the School of the Arts upon approval of the department chair.

## Advising

All students accepted into advanced degree programs must make an appointment with the chair of the department or the graduate adviser prior to registration for their first semester of course work. Normally, the student's initial adviser will be the chair of the department; but students may be assigned an adviser more directly related to their areas of concentration.

Students also are encouraged to consult faculty members outside their major area and arrange with the appropriate departmental chair to use facilities and equipment available in other departments.

## Finances

### Special charges

All degree-seeking graduate students are charged an art comprehensive fee. The art comprehensive fee is not charged to students who are registered only in course work to complete a dissertation/thesis/creative project or who are enrolled in order to satisfy the one-credit requirement for continuous enrollment. Nondegree-seeking graduate students enrolled in any of the courses that require an additional outlay for materials will be billed for those individual fees by the Student Accounting Department.

In addition to the comprehensive fee for all majors in the School of the Arts, all students registering for private music lessons pay an applied music fee.

## Financial support

The School of the Arts awards a limited number of graduate assistantships and scholarships to full-time students. Please see the [specific program requirements](#) for more information and application deadlines.

## Advanced degree candidacy

Students seeking an advanced degree in all programs must apply for advanced degree candidacy. Those seeking the M.A.E. And the M.M. must submit the application during or after the completion of the first nine semester credits of graduate work and prior to the completion of 18 semester credits. Students pursuing the M.F.A. Degree must submit the application during or after the completion of the first 15 semester credits of



graduate work and prior to the completion of 30 semester credits. Applications for candidacy are available in the departmental offices and the Office of Graduate Studies, School of the Arts.

Admission to a degree program does not constitute candidacy, and admission to degree candidacy is not an automatic process. Departments carefully review applicants for candidacy on such basis as examination or review of creative work or performance. Upon certification by the department that the applicant has met all departmental expectations, including the minimum 3.0 GPA and is adequately prepared to continue pursuing the degree program, the School of the Arts will admit the applicant to degree candidacy.

Students who are found to be inadequately prepared to continue their graduate programs, but who demonstrate the potential to ultimately fulfill degree requirements will be advised as to what additional work will be needed in order to meet departmental expectations. Candidacy, in such instances, will be postponed until departmental expectations are satisfied; postponement of candidacy may result in termination of financial assistance. Students whose academic or creative work demonstrate no likelihood of successful completion of a graduate program will be denied candidacy by the School of the Arts.

### Advanced degree requirements

- Students must achieve candidacy (with the exception of art history students).
- Students must complete all formal course work.
- Students must maintain at least a 3.0 cumulative GPA. No grade below "B" will count toward graduation for students in the art history and the visual communications degree programs. For all students in the theatre program, any grade below "B" in any course will result in termination from the degree program. Students in all programs in the Department of Music must not have more than six hours or 20 percent of semester hours attempted — whichever is greater — with a grade of "C." For all other degree programs in the School of the Arts, no grade below "B" is acceptable for any course within the student's major department, and a grade below "B" in a course in the student's major department will result in termination from the degree program.
- All students must complete the culminating project (dissertation, thesis, final examination, creative project, recital, etc.) as outlined in departmental guidelines. The thesis, or other written documentation related to the culminating project, must be done in a form that can be retained by the university and in accordance with departmental guidelines. Students preparing a thesis must use the guidelines set forth in the Preparation of Thesis, available in departmental offices or the Office of Graduate Studies, School of the Arts.

### Residency requirements

Candidates for the master of fine arts degree in the fine arts and theatre must complete a minimum of one-third of their degree program semester-hour credits within one calendar year.

Candidates for all master's degrees in the School of the Arts have five years plus two possible extensions of one year each to complete all degree requirements. The above limitations apply to both full-time and part-time students. A petition for an extension is initiated with the academic or thesis adviser.

### School of the Arts Library

The School of the Arts Library, located in the Pollak Building, has a

collection of more than 450,000 slides and a working collection of current art publications and magazines.

VCU is a short distance from Washington, D.C., Baltimore, Philadelphia and New York City and the museums, libraries and research facilities in those urban areas.

## Design, Master of Fine Arts (M.F.A.)

### Admission requirements summary

#### Design, Master of Fine Arts (M.F.A.)

Indicate specialization:

The purpose of this advanced degree program in design is to prepare the individual designer to assume a leadership role in a complex and expanding profession. The course work, applied experience and research that constitute the program will enable the designer to better solve visual and spatial problems and to function more effectively as an administrator, planner and educator.

The program offers the graduate student the opportunity to use appropriate courses and resources from schools within the university, to participate in internships and research with various agencies and organizations concerned with programs of design, and to view design as an interdisciplinary profession with an essential contribution to make toward the solution of the problems of today.

### Characteristics of the program

The Master of Fine Arts in Design is an advanced interdisciplinary program in the study of design that utilizes knowledge and human potential in alternative ways to define problems and create change.

Graduate students not only have the opportunity to work within a design field, such as visual communications and interior environments, but also have the opportunity to develop competencies across fields and to engage in research and inquiry of a social or environmental nature to create new visual forms and communicative content in a rapidly changing society.

### Internship and field experiences

Within a professional school of the arts in an urban university there are excellent opportunities for appropriate graduate field experiences. They include:

- formal arrangements with state agencies, industries, foundations and community organizations that would enable the graduate designer to function as a member of a project team or task force,
- service to various organizations, offered as the need arises, possibly with the student working on a specific problem or project, and
- research internships developed with the university on school-supported or outside-funded projects, especially those that concern social problems, health care and institutional environments.

### Program requirements

#### Thesis

The thesis or creative project is a requirement for the M.F.A., design

(visual communications) degree and a research-design project and exhibition are required for the M.F.A., design (interior environments) degree. The culminating work is done in a form which can be retained by the university.

### Examples of thesis

**Interior environments:** An investigation in a scholarly area or specific research and documentation of a technical or creative project.

**Visual communications:** An exhibition of a visual communications problem appropriately documented or a specific research problem that explores the communicative, formal, and/or technological aspects of visual problem solving.

## School of the Arts and university courses

The following courses common to all graduate programs in the School of the Arts are available to M.F.A. in Design students who desire to engage in research supervised by qualified professors within the school and other academic divisions within the university.

ARTS 592, 692 Individual Projects/Fieldwork  
ARTS 704, 705 Research in the Arts

A variety of graduate courses offered within the School of the Arts can be utilized as electives by the student in this degree program. Some examples are:

ARTH 539 Advanced Studies in 20th Century Art and Architecture  
ARTH 574 Advanced Studies in Film  
PAPR 605 Graduate Painting  
PAPR 615 Graduate Printmaking  
PAPR 621 Graduate Drawing  
SCPT 500, 600 Graduate Sculpture  
THEA 603, 604 Problems in the History of Dramatic Literature

VCU offers a wealth of graduate courses that can, as electives, support the educational process and personal development of graduate students.

## Interior Environments – Postprofessional Track

### Admission requirements summary

#### Interior Environments – Postprofessional Track

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.F.A.	Fall	Feb 1	None

#### Special requirements:

Portfolio necessary, proposal for topic and course of study, 3 to 5 page (minimum) sample of academic writing. Interview recommended. Minimum TOEFL score 250.

Send portfolio to Graduate School with application and supporting documentation. Include self-addressed, stamped envelope for return of portfolio.

The Postprofessional Track is a concentration in interior environments, one of about 10 available nationally, that allows students who already have an undergraduate degree in interior design or architecture the opportunity to develop an individualized direction in scholarship. Admission is highly selective and open only to students who have demonstrated a high caliber of work at the undergraduate and/or master's level.

### Specific admission requirements

Students may enter the postprofessional track in the fall semester only. Admission to the graduate degree program follows successful completion on an undergraduate degree program in interior design or in a related design degree program (such as architecture). All students are required to have a cumulative 3.5 GPA before entering the program. A proposal that outlines the topic and course of study and a three to five page (minimum) sample of academic writing must be submitted with the application. Prospective students should identify both their area of specialization and the faculty member(s) they wish to work with in their application. Interview is highly recommended.

Students are required to have computer graphics and word processing proficiency. A PC laptop computer is required. Information about the current computer package is available on the department Web site.

#### Portfolio

A minimum of 10 recent design projects that exemplify awareness, understanding and competency in creative design, graphic skills and technical ability are required. Other pertinent data should be included as necessary.

### Degree requirements

A minimum of 60 credits is required within prescribed courses. A research-design project is required to complete the program of study. This project is undertaken and developed in the context of IDES 699 and must consist of the testing of an original idea that is supported by research. This information will be synthesized through the design development process and culminate in an individual creative project of complex scale and scope. Documentation must follow established guidelines and be presented in a form that can be retained by the department and the university. On completion of the thesis, students participate in an oral examination and a graduate exhibition.

### Typical program pattern

#### Interior Environments – Postprofessional Track (Track A)

	credits
Semester 1	
IDES 601 Graduate Interior Environments Studio	9
IDES 690 Graduate Seminar	3
Design/arts elective*	3
Total	15
Semester 2**	
IDES 601 Graduate Interior Environments Studio	9
IDES 690 Graduate Seminar	3
Design/arts elective	3
Total	15
Summer 1 or 2	
IDES 693 Interior Design Internship (optional) (can be substituted for elective credit)	3-6
Semester 3	
IDES 601 Graduate Interior Environments Studio	9
IDES 690 Graduate Seminar	3
IDES 635 Teaching Practicum or IDES 623 Advanced Design Studies or open elective	3
Total	15
Semester 4	
IDES 623 Advanced Design Studies	6
IDES 690 Graduate Seminar	3
IDES 699 Creative Project/Thesis	6

Total	15
Program total	60-66

\* At least one elective must be a studio class.

\*\* Candidacy review occurs during the second semester.

## Interior Environments – Professional Entry Level Track

### Admission requirements summary

#### Interior Environments – Professional Entry Level Track

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.F.A.	Fall	Feb 1	None

#### Special requirements:

Portfolio required to be waived from IDES 500 Art and Design Methods Studio. 3 to 5 page (minimum) sample of academic writing. Interview recommended.

Send portfolio to Graduate School with application and supporting documentation. Include self-addressed, stamped envelope for return of portfolio.

The Professional Entry Level track is a 60-72 credit program for second-degree seekers who have a proven record of academic excellence in a field other than architecture or interior design and are interested in pursuing a career in interior design. The structure of the track echoes the B.F.A. in Interior Design program in content, but advances the student at a very accelerated rate during the first year and summer, bringing students parallel with the curriculum of the postprofessional track by the second year.

The curriculum is highly sequenced and students are admitted to the program for the fall semester only. Those students not having an art or design background also are required to take part in an intensive workshop in the summer that introduces and develops drawing, presentation skills and an understanding of two-dimensional and three-dimensional design methods. Students must successfully pass the workshop with a grade of "B" or better to begin the professional entry level track. Students who are experienced in art or design and wish to be waived from this requirement must submit a portfolio for review with their application. This portfolio should contain at least 15 images that demonstrate art and design skills. Powerpoint is the preferred format for the portfolio.

### Curriculum

	credits
Summer 1	
IDES 500 Art and Design Methods Studio	12
Students with no art or design background must successfully complete this class with a grade of "B" or better as a prerequisite for enrolling in the program.	
Semester 1	
IDES 501 Introductory Graduate Studio I	9
IDES 521 Advanced Material Studies for Interior Environments	2
IDES 531 Principles and Practices of Interior Environments	2
IDES 651 History and Theory of Interior Environments I	2
Total	15
Semester 2*	
IDES 502 Introductory Graduate Studio II	9
IDES 522 Environmental Factors for Interior Environments	2
IDES 611 Advanced Graphics for Interior Environments I	2
IDES 652 History and Theory of Interior Environments II	2
Total	15
Summer 2	
IDES 693 Interior Design Internship	4-6

Semester 3	
IDES 601 Graduate Interior Environments Studio	9
IDES 612 Advanced Graphics for Interior Environments II	2
IDES 626 Advanced Light and Color for Interior Environments	2
Total	13

Semester 4	
IDES 624 Advanced Furniture Design	2
IDES 631 Ethics and Business Procedures	2
IDES 690 Graduate Seminar	3
IDES 699 Creative Project/Thesis	6
Total	13

Program total	60-72
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\* Candidacy/portfolio review occurs during the second semester.

## Visual Communications Track

### Admission requirements summary

#### Visual Communications Track

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.F.A.	Fall only	Feb 1	

#### Special requirements:

Portfolio necessary.

Send portfolio to Graduate School with application and supporting documentation. Include self-addressed, stamped envelope for return of portfolio.

Interview recommended.

The graduate program in visual communications is oriented toward individuals interested in pursuing a career in design education and/or furthering their professional practices, in conducting visual or theoretical research, and in investigating the intersections of function and expression in design problem solving.

### Specific admission requirements

The priority deadline for fall admission is Feb. 1. The program will continue to review applications on a space-available basis until June 30.

#### Undergraduate preparation

The 36 semester credits in studio art should include a minimum of 20 semester credits in visual communications and/or related fields. Under special circumstances, these requirements may be waived.

#### Portfolio

A minimum of 20 and a maximum of 40 images that demonstrate visual organization, creative problem-solving ability and potential for research and growth are required. Portfolios may be submitted in either slides or CDROM (PDF files preferred). Under special circumstances, these requirements may be waived; applicants are accepted into a provisional course of study.

#### Interview

The department strongly recommends that applicants arrange an interview with the associate chair to meet with graduate faculty and current students and to tour facilities. Applicants may contact the department to schedule

an interview.

## Typical program pattern

<b>First semester</b>	credits
Visual communications seminar	3
Visual communications workshop	9
Graduate elective	3
	<hr/>
	15
<b>Second semester</b>	
Visual communications seminar	3
Visual communications workshop	9
Graduate elective	3
	<hr/>
	15
<b>Third semester</b>	
Visual communications seminar	3
Visual communications workshop	9
Graduate elective	3
	<hr/>
	15
<b>Fourth semester</b>	
Visual communications seminar	3
Directed research in visual communications	6
Thesis or creative project	6
	<hr/>
	15
	<hr/>
	60

## Fine Arts, Master of Fine Arts (M.F.A.)

### Admission requirements summary

#### Fine Arts, Master of Fine Arts (M.F.A.)

Indicate specialization:

Students may be admitted to one of the following School of the Arts Master of Fine Arts degree tracks: ceramics, fibers, furniture design, glassworking, jewelry/metalworking, painting, photography and film, printmaking or sculpture. Students completing the M.F.A. in Fine Arts will be prepared for professional artistic practice directed toward the creation of works of art, the application and transmission of knowledge about works of art and their interrelationships with each other and with other aspects of culture. The graduate program advances the development of:

- individual studio and scholarly talents, interests and philosophies, used creatively to both expand and preserve our cultural heritage,
- professional studio competence as exemplified by a significant body of work,
- individuals with the potential to solve contemporary problems in all aspects of the visual arts and to explore and address new questions and issues,
- professional competence in the dissemination of knowledge, including logical, clear verbal and written presentation of aesthetic ideas in teaching and other contexts, and
- scholarly competence in the organization, evaluation and interpretation of knowledge.

## Admission requirements

### Undergraduate preparation

In addition to the School of the Arts admission requirements, applicants in the visual arts must have completed a minimum of 36 semester hour credits in art at the undergraduate level.

### Portfolio

Refer to the specific specialization for the portfolio requirements.

## Characteristics of the program

In M.F.A. studio art programs, assessment of progress is conducted on a regular and periodic basis through scheduled critiques and final course critiques and evaluations. Students have frequent opportunities to exhibit their work in the context of their educational programs. They are encouraged to develop and present their work in circumstances that develop connections with the professional world related to their course of study. Students are admitted to degree candidacy after receiving approval by a faculty review committee.

## Program requirements

Each specialization within the M.F.A. in Fine Arts program requires specific course work. Refer to the specific specialization for the program pattern. The M.F.A. candidate is required to present a final body of work demonstrating professional competence. This usually takes the form of an exhibition, written statement and oral review by a graduate faculty committee. The documentation of the culminating work is done in a form that can be retained by the university.

### Specializations

- ceramics, fibers, furniture design, glassworking or jewelry/metalworking
- painting or printmaking
- photography and film
- sculpture

## Ceramics, Fibers, Furniture Design, Glassworking and Jewelry/metalworking

### Admission requirements summary

#### Ceramics, Fibers, Furniture Design, Glassworking and Jewelry/metalworking

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.F.A.	Fall	Feb 15	

**Special requirements:**

Portfolio: 20 images of recent, representative work in the field of the specialization

You may submit still images (digital or slides) and/or moving images. Please note the following guidelines for each:

**Still images**

- Digital images must be in PDF or Powerpoint format only.
- Test all Powerpoint presentations to be sure that they will run on Mac and PC.
- Digital images must be 150 dpi.
- Print your name directly on slides – no labels.

Please note that you may send digital images or slides; do not replicate the same images in both formats.

Send portfolio to Graduate School with application and supporting documentation. Include self-addressed, stamped envelope for return of portfolio.

The M.F.A. program requires 60 credits, which students usually complete in two years of full-time study. The majority of credits are taken in the student's area of specialization. Graduate seminars, art history courses and other studio/academic electives round out the graduate student's individualized program. Studio visits and critiques with visiting artists are an important aspect of the program.

Within the studio concentration, emphasis is placed on self-motivation, individual investigation, and the development of professional attitudes and skills. Graduate students are expected to demonstrate a serious commitment to their work and to develop mature ideas and forms of expression. Admission to the graduate program is highly selective and competitive.

Graduate students interact formally and informally with the faculty in their areas and with other faculty in the School of the Arts. Each graduate student works closely with a faculty committee that meets twice a semester for critiques and discussions. At the end of the first year, students present their work to their committee and departmental faculty in a candidacy review. At the successful completion of the 60 credits, a thesis exhibition is mounted at the university's Anderson Gallery or at an alternative venue.

**Admission requirements**

In addition to the requirements specified in the M.F.A. in Fine Arts section of this bulletin, students are required to submit a portfolio. The portfolio should consist of 20 slides of recent work in the discipline media area of application (i.e., ceramics, fibers, wood/furniture design, glassworking, jewelry/metalworking).

**Specialization requirements****M.F.A. in Fine Arts – ceramics, fibers, furniture design, glassworking or jewelry/metalworking**

Program pattern	credits
Studio	42
Electives, including art history	9
Graduate seminar	9
	<hr/>
	60

**Admission requirements summary****Painting or Printmaking**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.F.A.	Fall	Feb 15 to be considered for teaching assistantships, working fellowships and scholarships	
		Jan 15 to also be considered for the University Graduate School Fellowship	

**Special requirements:**

Portfolio: 20 slides of recent work or appropriate documentation

Send portfolio to Graduate School with application and supporting documentation. Include self-addressed, stamped envelope for return of portfolio.

The Master of Fine Arts program is based on intensive studio practice at an advanced level in the areas of painting and printmaking. The program is highly selective and is presently limited to 15 participants.

The Master of Fine Arts degree program in painting or printmaking requires 60 credits and is usually completed in two years of full-time study. Most of these credits are in studio areas and are augmented by related courses in specialized academic fields. A graduate seminar meets weekly and addresses topics related to contemporary art and theory. Two semesters of Art and Critical Theory, a course that surveys the major themes of contemporary art criticism, also are required.

Graduate students meet with individual committees composed of three faculty members. Each committee and student conducts an ongoing dialogue and critique. At the end of the second semester students discuss their work at a candidacy critique comprised of their committee and additional faculty. M.F.A. recipients mount a comprehensive exhibition of their work at the university's Anderson Gallery at the successful conclusion of the program's second year.

**Admission requirements**

In addition to the requirements specified in the M.F.A. in Fine Arts section of this bulletin, students are required to submit a portfolio. The portfolio should consist of 12 slides of representative work (painting) or 12 slides of representative work (printmaking).

**Specialization requirements****M.F.A. in Fine Arts – painting or printmaking****Program pattern**

	credits
<b>First semester</b>	
Major departmental studio	6
Approved graduate elective	3
Art and critical theory (PAPR 527)*	3
Graduate seminar (PAPR 690)***	3
	<hr/>
	15
<b>Second semester</b>	
Major departmental studio	6
Approved graduate elective	3
Art and critical theory (PAPR 528)*	3
Graduate seminar (PAPR 690)***	3
	<hr/>
	15
<b>Third semester</b>	
Major departmental studio	6

**Painting or Printmaking**

Approved graduate elective	3
Non-studio graduate elective	3
Graduate seminar (PAPR 690)***	3
	<hr/>
	15
<b>Fourth semester</b>	
Major departmental studio**	9
Approved graduate elective	3
Graduate seminar (PAPR 690)***	3
	<hr/>
	15
	<hr/>
	60

\* Students who received credit as VCU undergraduate students for PAPR 527, 528, may substitute for a non-studio graduate elective.

\*\* An exhibition will be required as a prerequisite for graduation.

\*\*\* Enrollment in the graduate seminar is mandatory for the duration of the student's study in the graduate program.

## Photography and Film

### Admission requirements summary

#### Photography and Film

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
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M.F.A. Fall only Jan 6

#### Special requirements:

Portfolio: Submit 20 still images, or a minimum of three recent films or videos for which the applicant has had primary responsibility in production, or a combination of still images and short video clips, not to exceed 20. Single media as well as mixed-media and multimedia works may be submitted. Formats accepted: slide transparency, CD, DVD and mini DV. Internet Web site addresses may be submitted in addition to the above, but may not replace the above. **Include a self-addressed stamped envelope for return of materials.**

The program is meant to be flexible. Participants in the program may use either traditional or electronic technology to accomplish their personal goals. The program culminates with the presentation of a body of work, both written and visual, that coherently expresses some aspect of the medium.

The successful candidate for the M.F.A. in Fine Arts degree will be prepared to function as a working photographer or filmmaker and to begin a career in teaching photography or film.

### Admission requirements

#### Undergraduate preparation

Thirty-six semester hour credits in studio art at the undergraduate level are preferred; they should include a minimum of nine semester hour credits in photography or cinematography. Applicants who do not meet these requirements may be considered.

#### Portfolio

A portfolio must accompany the application. Applicants should submit 20 still images; or a minimum of three recent films or videos for which the applicant has had primary responsibility in production; or a combination of still images and short video clips, not to exceed 20. Single media as well as mixed-media and multimedia works may be submitted. Formats accepted: slide transparency, CD, DVD and mini DV. Web site addresses may be submitted in addition to the above, but may not replace the above. **Include a self-addressed stamped envelope for return of materials.**

### Degree requirements

The advanced study of photography and film is both broad and varied. Therefore, the program's requirements are flexible and determined by the needs of each student on an individual basis. There are, however, a few definite requirements. On completion of the program, each student must have knowledge of contemporary art history, a more in-depth knowledge of the history of his or her discipline and an understanding of the critical dialogue that is connected with his or her medium. Courses are suggested for students to meet these requirements, based on their background.

#### Typical program pattern

	credits
Photographic studio	24
Seminar in photography and film	12
Research in photography and film	9
Approved electives	12
Graduate exhibition	3
	<hr/>
	60

## Sculpture

### Admission requirements summary

#### Sculpture

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
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M.F.A. Fall Feb 15 to be considered for teaching assistantships, working fellowships and scholarships

Jan 15 to also be considered for the University Graduate School Fellowship

**Special requirements:**

- Portfolio: 20 images of representative work, three of which must be drawings that reflect your sculpture and serve as a window into your process. Sketchbook images are fine.

You may submit still images (digital or slides) and/or moving images. Please note the following guidelines for each:

**Still images**

- Digital images must be in PDF or Powerpoint format only.
- Test all Powerpoint presentations to be sure that they will run on Mac and PC.
- Digital images must be 150 dpi.
- Print your name directly on slides – no labels.

Please note that you may send digital images or slides; do not replicate the same images in both formats.

**Moving images**

- Moving images must be on DVD.
- Test all DVDs to be sure that they will play on a standard commercial DVD player.

Please note that a moving image equals one image of representative work. You may submit no more than three minutes total.

- Corresponding documentation list
- Three letters of reference
- Artist's statement (replaces "Personal Statement" required on VCU Graduate application guidelines)
- Resume
- Two official transcripts from each college or university previously attended.
- S.A.S.E. for return of portfolio

Both formal and informal contact with faculty are designed into the program. Along with the Department of Sculpture's faculty, graduate students are exposed to a vigorous visiting artist schedule. Through studio reviews, seminars and research, the students are expected to build an awareness of contemporary and historical definitions of art that will influence their creative work. In addition to their own investigations, graduate students participate in and contribute to the undergraduate program.

While the graduate program is generally a two-year, four-semester in-residence program, students are expected to continue studio pursuits either on campus or at an alternative site throughout the calendar year.

**Admission requirements**

- Portfolio: 20 images of representative work, three of which must be drawings that reflect your sculpture and serve as a window into your process. Sketchbook images are fine.

You may submit still images (digital or slides) and/or moving images. Please note the following guidelines for each:

**Still images**

- Digital images must be in PDF or Powerpoint format only.
- Test all Powerpoint presentations to be sure that they will run on Mac and PC.
- Digital images must be 150 dpi.
- Print your name directly on slides no labels.

Please note that you may send digital images or slides; do not replicate the same images in both formats.

**Moving images**

- Moving images must be on DVD.
- Test all DVDs to be sure that they will play on a standard commercial DVD player.

Please note that a moving image equals one image of representative work. You may submit no more than three minutes total.

- Corresponding documentation list
- Three letters of reference
- Artist's statement (replaces "Personal Statement" required on VCU Graduate application guidelines)
- Resume
- S.A.S.E. for return of portfolio

**Specization requirements****M.F.A. in Fine Arts – sculpture****Program pattern****First semester**

Studio (graduate sculpture)	8
Elective	3
Graduate seminar*	4

credits

15

**Second semester**

Studio (graduate sculpture)	8
Elective	3
Graduate seminar*	4

15

**Third semester**

Studio (graduate sculpture)	8
Elective	3
Graduate seminar*	4

15

**Fourth semester**

Studio (graduate sculpture)	8
Elective	3
Graduate seminar*	4

15

\* Enrollment in the graduate seminar is mandatory for the duration of the student's study in the graduate program.



## Media, Art, and Text, Doctor of Philosophy (Ph.D.)

### Admission requirements summary

#### Media, Art, and Text, Doctor of Philosophy (Ph.D.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall	Mar 15	GRE-General

#### Special requirements:

Writing sample for all applicants. Portfolio for students wanting to take studio courses at graduate level.

This interdisciplinary Ph.D., a collaboration between the Department of English, the School of the Arts and the School of Mass Communications, is a 42-credit program of core and elective courses, seminar experiences and creative work, and a strong research component in the form of a dissertation project and defense.

The MATX Ph.D. program focuses on new media while also retaining both a historical and a theoretical dimension by encouraging the reassessment of the production, dissemination and employment of "traditional" literary texts, works of art and other kinds of texts, while in turn studying how these texts function within specific settings informed by gender, ethnicity, race and other cultural factors. The course of study in the Ph.D. also extends its reach to film and new media, television, and advertising, addressing the growing need for the study of virtual and visual texts. The program is not limited to one department or discipline within the participating units. Rather, it breaks down "disciplinary walls" in order to cultivate the research possibilities available to students, allowing them to fashion new intellectual areas for the creation and dissemination of knowledge.

### Admission requirements

The purpose of the admission requirements for the Ph.D. program in Media, Art, and Text is to assure the selection of outstanding students whose motivations, ability, education, and interests prepare them for interdisciplinary graduate study.

The following are required for admission to the program:

- A master's degree from an accredited institution in an area appropriate to the study of textual, verbal, interdisciplinary studies or visual art. Such degrees could include but not be limited to studies in the humanities, fine arts, art education, communication or advertising. Candidates must have a minimum GPA of 3.0 in post-undergraduate studies.
- A candidate who plans to work in the studio arts also will need to submit a portfolio of at least 20 slides or equivalent of past work that demonstrate their ability to do graduate-level work.
- All candidates must submit a writing sample that demonstrates the ability to write clearly, analyze effectively and perform graduate-level seminar work.
- Satisfactory scores on the Graduate Record Exam.
- For applicants whose native language is not English, satisfactory scores from a standardized test commonly used and deemed appropriate for evaluation of English language proficiency, such as the TOEFL.
- Letters of recommendation from three present or former instructors or other individuals qualified to evaluate the applicant's ability to engage

in interdisciplinary graduate study in media, art and text.

- A written personal statement describing the applicant's interest, motivation, education and goals in pursuing this degree. In this statement, the applicant needs to speak specifically to the importance of interdisciplinarity to his or her academic goals and also offer evidence of his or her suitability to pursue such a degree.

### Curriculum

The 42-hour curriculum of the Ph.D. program in Media, Art, and Text is designed to foster an intellectual, creative and artistic environment in which students from different disciplines can work collaboratively and independently to develop and disseminate knowledge in this emerging field.

### Core curriculum

The first year has 12 hours of shared course work that is required of all candidates and six hours of core electives. The courses include:

	credits
<b>First year</b>	
<b>Fall</b>	
MATX 601 Texts and Textuality	3
MATX 602 History of Media, Art, and Text	3
Elective (research methods or theory course from approved list below) within the core	3
<b>Spring</b>	
MATX 603 History of Multimedia and Interdisciplinarity	3
MATX 604 Production and Application Workshop	3
Elective (research methods or theory course from approved list below) within the core	3
<b>Approved electives in the first year</b>	
<b>Theory courses</b>	
ARTH 571 Advanced Studies in Film Theory	
ARTH 555 Advanced Studies in Aesthetics and Art Theory	
ENGL 531 Literary Theory	
ENGL 637 Theories of Rhetoric and Composition	
MASC 612 Mass Communications Theory	
MASC 613 Mass Media and Society	
PAPR 527, 528 Art and Critical Theory	
THEA 510 Theatre Historiography	
THEA 603 Dramatic Literature and Theory	
THEA 604 Modern Theatre: Theory and Practice	
<b>Research methods courses</b>	
ARTE 690 Issues and Methods of Inquiry in Art Education	
ARTH 590 Art Historiography and Methodology	
ENGL 530 Introduction to Scholarship in English Studies	
MASC 611 Research Methods in Mass Communications	
THEA 510 Theatre Historiography	

### Second year

<b>Fall</b>	
9 hours of graduate electives	9

**Spring**

9 hours of electives and study credits to prepare for spring exams and to write a project proposal. By the end of the spring semester, candidates should have completed their comprehensive exams. By the end of the spring semester, candidates should also have their project proposal completed and approved. Students will be required to take 18 hours in elective courses. In addition to MATX 690, the following 500- and 600-level seminars also may be used for elective credits. Students are advised to choose courses that directly relate to their research and creative work. Students must meet the prerequisites for these courses either through their previous course work, previously earned degrees or comparable demonstration of mastery needed for the course.

**Approved electives in the second year**

ARTE 501-502 Concepts in Art Education  
 ARTE 520 Teaching Concepts Through the Arts  
 ARTE 553 Art and Perceptual Communication  
 ARTE 592, 692 Independent Study in Art Education  
 ARTE 600 Seminar: Issues in Art Education  
 ARTE 611, 612 Literature in Art Education  
 ARTE 665 Curriculum Development and Evaluation  
 ARTE 670 Technology in Art Education  
 ARTE 680 Teaching Laboratory  
 ARTE 691 Topics in Art Education  
 ARTH 555 Advanced Studies in Aesthetics and Art Theory  
 ARTH 556 Advanced Studies in Ideas and Criticism in Art  
 ARTH 569 Advanced Studies in Museum Methods  
 ARTH 571 Advanced Studies in Film Theory  
 ARTH 574 Advanced Studies in Film  
 ARTH 759 Seminar in Aesthetics, Theory and Criticism of Art and Architecture  
 ARTH 761 Seminar in Latin American Renaissance Art and Architecture  
 ARTH 762 Seminar in Latin American 17th- and 18th-century Art and Architecture  
 ARTH 789 Problems in Advanced Art and Architectural History  
 ARTH 791 Topics in Early Modern Art  
 CRAF 690 Graduate Seminar  
 ENGL 532 Applied English Linguistics  
 ENGL 553 Studies in Linguistics  
 ENGL 611 The Writer in His Own Time  
 ENGL 614 Major Works of Literature  
 ENGL 617 Major Literary Modes  
 ENGL 620 Patterns in Literary Thought  
 ENGL 624 Literature in Society  
 ENGL 627 Literary Genre  
 ENGL 652 Studies in Writing and Rhetoric  
 ENGL 661 Themes in Interdisciplinary Studies  
 ENGL 670 Literary Editing and Publishing  
 ENGL 672 Writing Nonfiction  
 GDES 621 Visual Communications Seminar  
 PAPR 690 Graduate Seminar  
 PHTO 690 Seminar in Photography and Film  
 MASC 605 Technology in the Classroom  
 MASC 611 Research Methods in Mass Communications  
 MASC 612 Mass Communications Theory  
 MASC 613 Mass Media and Society  
 MASC 620 Seminar in Mass Communications History  
 MASC 623 Ethics and Law in Mass Communications  
 MASC 624 Basic Photojournalism  
 MASC 691 Topics in Mass Communications  
 MHIS 615 Seminar in Music Theory  
 MHIS 650 Seminar in Music History  
 MUED 600 Seminar in Music Education

SCPT 517 Seminar in Contemporary Sculpture  
 SCPT 591 Topics in Sculpture  
 SCPT 690 Graduate Seminar  
 THEA 603 Dramatic Literature and Theory  
 THEA 604 Modern Theatre: Theory and Practice  
 THEA 623 Advanced Studies in Modern Drama  
 THEA 624 Advanced Studies in Modern Drama  
 THEA 791 Seminar in Special Issues in Theatre

**Degree requirements**

Candidates for degrees are eligible for graduation upon completion of all academic requirements in effect at the time of their first registration, provided the students are continuously enrolled and provided the requirements are met within the specified time frame.

**Credit requirements**

Students are required to complete 42-credit hours in core and elective courses and to conduct research or produce significant work within the participating disciplines. The core course work will be completed with courses offered through Media, Art, and Text, but the additional elective courses may draw from both seminars offered through Media, Art, and Text, and approved seminars offered in participating units.

**Grade requirements**

To graduate, degree applicants must achieve an overall grade-point average of 3.0 ("B") on a 4.0 scale with a grade of "C" in no more than two courses. The GPA for graduation will be based on all graduate courses attempted after acceptance into the program.

**Admission to candidacy for Ph.D. degree**

Before admission to candidacy for the Ph.D., students must have completed all required course work, successfully completed a comprehensive examination and fulfilled the requirement for demonstrated competencies.

**Requirement for demonstrated competencies**

In addition to the core courses and electives selected from the curricular offerings, students must also demonstrate competencies in two areas:

1. All students must achieve competency by demonstrating mastery in computer-based media, leading to the creation and maintenance of an e-portfolio. This portfolio will be a component of the core courses in the program. When presented to demonstrate competency, the e-portfolio will be accompanied by a theoretical argument or justification.
2. Students and their dissertation committees will determine a second area of competency and the manner in which it will be fulfilled. This second competency will be integral to the interdisciplinarity of the student's course of study. Such areas might include but not be limited to foreign language (recommended for students with art history focus), rhetoric, socio-linguistics, statistics, research methods in ethnography or other specializations, or arts administration/management.

These requirements must be met by the time of the qualifying exam (e.g., not later than the end of the third semester of the program).

### Qualifying examination

Upon completion of all required course work, student will take a written qualifying examination. Exams have two components: one that covers material from the core curriculum and a second related to the candidate's specific focus area. The exam will be written by the Graduate Studies Committee. The first portion of the exam, based on the core curriculum, will be the same for all students. The second portion will be based on a bibliography compiled by the candidate and his or her project adviser. The second portion of the exam is integral to the candidate's project proposal discussed in the section entitled "dissertation research."

## Department of Art Education

The Master of Art Education program attempts to expand and further refine each M.A.E. student's ability, knowledge and attitudes in order to provide the profession with more effective art teachers, coordinators, supervisors and other educational specialists in the arts.

### Administration

**Pamela G. Taylor**

Associate Professor and Interim Department Chair

## Art Education, Master of (M.A.E.)

### Admission requirements summary

#### Art Education, Master of (M.A.E.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.A.E.	Fall Spring	Feb 1 Oct 1	GRE and/or Praxis I recommended (but not required)

#### Special requirements:

Portfolio: Applicants must submit evidence of creative or professional involvement in format of their choice.

Send portfolio to Graduate School with application and supporting documentation. Include self-addressed, stamped envelope for return of portfolio.

The Master of Art Education program is structured on an individualized basis rather than on a prescribed program of graduate studies. To benefit from the program's flexibility, the M.A.E. student is assisted by a faculty adviser in determining his or her own educational needs and professional goals. With the assistance of the adviser, the M.A.E. student determines a viable structure for the content and sequence of a program of graduate studies.

Such a program can utilize the collective expertise of the art education faculty as well as appropriate community resources. Graduate course work, therefore, could include both on-campus and off-campus involvement.

Opportunities for personal growth through the M.A.E. Program also include the rich resources of other graduate departments in the university in the visual and performing arts, education (including supervision, administration and special areas), the natural and social sciences, and the humanities. Alternative approaches to traditional thesis methods also are encouraged within the program.

### Admission requirements

### Undergraduate preparation

In addition to the School of the Arts admission requirements, applicants in art education must have completed a minimum of 36 semester-hour credits in studio art at the undergraduate level. It is desirable for applicants to have had at least two years of teaching experience prior to beginning graduate studies.

### Portfolio

Applicants must submit evidence of creative or professional involvement in the format of their choice. Included should be material such as slides of representative work, description of professional activities, articles published, curriculum and program material developed, and other documentation of activities with artists, teachers and children.

### Degree requirements

Program pattern	credits
Art education electives	12
Approved electives	15
Issues and methods of inquiry	3
Thesis or project option or nonthesis option	6
	<hr/> 36

### Thesis or project option

A thesis or project option may develop from graduate course work or professional involvement. Projects are those endeavors of thesis proportion that do not fit the traditional thesis format. A thesis or project may be explored by descriptive research, historical research, empirical/statistical research, design of learning packages, philosophical study, curriculum development or action research.

### Nonthesis option

In lieu of the thesis, students may elect to complete six credit hours of graduate course work in the Department of Art Education. The selection of these six credits is subject to the approval of the student's adviser. In addition, the student must successfully pass a written and oral examination at the conclusion of all course work. The examination will pertain to the course work, to contemporary issues in the field and to the student's particular area of expertise.

## Department of Art History

The department offers a broad-based education in the humanistic discipline of art history at the master's and doctoral levels.

Overseas studies are available through university-sponsored programs abroad in Europe and Asia. Graduate assistantships and fellowships are available to full-time students.

### Administration

**James D. Farmer**

Department Chair and Associate Professor

## Art History, Doctor of Philosophy (Ph.D.)

## Admission requirements summary

### Art History, Doctor of Philosophy (Ph.D.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall only	Jan 15	GRE

#### Special requirements:

Contact the department for additional admission requirements.

The Ph.D. in Art History is a research-oriented degree designed to train critical and productive scholars who are well-grounded in the literature, methodology and major art historical problems in a designated area of study. The program's focus is on interdisciplinary and multicultural studies utilizing new critical methodologies.

Doctoral students will undertake an established program of course work and will be engaged in directed research and scholarly exposition within specialized areas of art historical inquiry.

## Admission requirements

Prospective students holding a master's degree in art history from VCU or any other accredited institution may apply directly to the doctoral program. In addition to all required VCU graduate application materials, applicants should submit either a completed master's thesis or two writing samples. A personal interview with the director of graduate studies and the prospective adviser is strongly encouraged prior to submitting an application. Prospective students with master's degrees in other fields may also apply, although additional course work may be required.

Prospective students who hold only a B.A. in art history or related field also may apply directly to the Ph.D. program but, if admitted, will need to complete the equivalent of the M.A. degree, including the thesis, before beginning Ph.D. course work. In addition to the School of the Arts requirements, applicants should have completed a minimum of 21 undergraduate semester credits in art history with additional work in relevant humanities and social science courses, such as English, philosophy, foreign language and history. Applicants should include with their application an undergraduate research paper in art history to serve as a writing sample. Students whose undergraduate training is less extensive may be admitted provisionally and subsequently attain full graduate status. Upon completion of M.A. course work (generally the beginning of the fourth semester), students wishing to continue in the Ph.D. program must secure the support of the prospective dissertation adviser and submit a formal request to the Graduate Committee. To continue students must maintain a minimum GPA of 3.8. If approved by the Graduate Committee, students will commence their Ph.D. course work the next semester, pending successful completion of the master's thesis.

Upon completion of the first nine credits of course work (first semester), the student will choose a program adviser, who, together with the departmental chair of the Graduate Committee, will advise the student in establishing a program of study.

For application materials, write to: Director of Graduate Studies, Department of Art History, 922 W. Franklin St., Richmond, VA 23284-3046.

## Degree requirements

Course work beyond the master's degree in art history:

	credits
Major area	9
Minor area	6
Art history electives	9
Dissertation	6

The requirements of the Graduate School for candidacy exams and dissertation committees apply to participants in this program. Part-time study for portions of the program is possible.

## Requirements for the Ph.D. degree

Doctoral students must demonstrate competency in two foreign languages before admission to candidacy. Foreign language competency demonstrated for an M.A. may be applied to this degree with departmental approval. Although French and German are typically the two languages of proficiency, a student may be required to demonstrate competency in other languages for study in particular areas. Students must take one departmental language exam in their first academic semester and, if necessary, the second in the second academic semester. Requests to repeat the exam more than once in a given language require departmental approval.

Ph.D. students must satisfy each of the following criteria for successful completion of the program: a) 24 credits of prescribed graduate course work beyond the master's degree; this must include a minimum of six credits in Western and six credits in non-Western areas, and a minimum of 12 credits in seminar courses; b) all language proficiency requirements; c) the comprehensive slide and field examinations; d) approved dissertation proposal with candidacy granted; and e) completed dissertation and successful defense. All degree requirements must be completed within seven years of the first semester of enrollment in the doctoral program.

## Majors and concentration

Ph.D. students must select major and minor areas under the direction of two different full-time department faculty members. The same faculty members may not supervise both areas for a single student. Students will select an area of minor concentration, which may be from any area of art historical inquiry outside the major or, upon approval of the Graduate Committee, may be outside the department. Students will be particularly encouraged to undertake cross-cultural investigations.

Nine credits will be taken in the major area and six in the minor; nine additional elective credits may be taken from any art history area. With approval of the Graduate Committee, students may substitute three elective credits with a course outside of the department.

## Comprehensive exam/admission to candidacy

All master's and doctoral students enrolled in the graduate program in art history must pass the departmental comprehensive slide examination given each semester. Doctoral students will be required to pass a field comprehensive examination, which may consist of written and oral components. After satisfactory completion of the comprehensive examination and demonstration of proficiency in two languages, the student will work with an adviser to establish a committee and will submit to said committee a dissertation proposal. Upon approval of the dissertation proposal, candidacy for the doctoral degree will be granted. Only after candidacy is granted may a student enroll for dissertation credits. (A student who does not pass the comprehensive examination may take that exam a second time. This second examination must be taken within six months of the first attempt.)

## Dissertation

After admission to candidacy, participants proceed to complete and defend their dissertation. This is done under the supervision of the dissertation director working in concert with the dissertation committee. Participants are required to maintain continuous enrollment of at least three credit hours

per semester (excluding summer) until they have attained six hours of dissertation credit, after which they may enroll for as few as one credit per semester. The number of credit hours per semester is expected to reflect the intensity of use of university resources, especially faculty time. The dissertation must represent independent research that is devoted to an original question or hypothesis with the appropriate development, analysis and interpretation. Successful defense of the dissertation completes the requirements for the degree.

## Financial assistance

Although financial assistance is limited, funds are available. No prospective student should refrain from seeking admission to the school for financial reasons alone. However, since funds available through the School of the Arts are limited, applicants are strongly urged to seek additional sources to finance their education.

## Research and teaching assistantships

Research and teaching assistantships may be available to doctoral students. Additional information is available from the director of graduate studies, Department of Art History.

## Art History, Master of Arts (M.A.)

### Admission requirements summary

#### Art History, Master of Arts (M.A.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.A.	Fall only	Jan 15	GRE

#### Special requirements:

Writing sample – an undergraduate research paper in art history

The Master of Arts program offers three different tracks:

M.A. in Art History – historical studies

M.A. in Art History – architectural history

M.A. in Art History – museum studies

### Architectural History Track

The Department of Art History offers a master of arts degree with a track in architectural history. While concentrating in architectural history, students are required to take courses in art history as well as museum studies and/or urban studies and planning. Such a program is designed for students who wish to pursue careers as academicians or practitioners in the field, as well as for those who wish to pursue a doctoral degree. The courses taken in museum studies, or in conjunction with the Department of Urban Studies and Planning, provide a unique interdisciplinary approach to the study of architectural history.

### Admission requirements

In addition to the School of the Arts requirements, applicants should have completed a minimum of 21 undergraduate semester credits in art and/or architectural history, of which six credits must be in the survey of architectural history. Some basic drafting experience also is recommended. Additional work in relevant humanities and social sciences, such as literature, philosophy, foreign language and history is necessary.

Applicants should include with their application an undergraduate research paper in art history to serve as a writing sample. Students whose undergraduate training is less extensive may be admitted provisionally and subsequently attain full graduate status.

### Degree requirements

A total of 39 credits in course work and thesis

	credits
Architectural history	12
Art history (period courses)	9
Historiography and methodology	3
Urban studies and urban planning and/or museum studies	9
Thesis	6
	<hr/> 39

At least 12 of the architectural and art history credits must be taken at the 600 or 700 level. Students must earn a minimum grade of "B" in ARTH 590 Historiography in order to enroll in subsequent graduate-level art history courses.

Students must demonstrate a reading knowledge of German or any appropriate Romance language by passing a departmental exam. All students must take the relevant departmental language exam during the first academic semester. Requests to repeat the exam more than once in a given language require departmental approval.

Students also must demonstrate general programmatic competence in art history by passing a comprehensive examination taken sometime toward the end of the course work.

The master's program culminates with a thesis, written under the direction of a departmental adviser and a thesis committee.

For more complete information and details on these procedures, contact the Department of Art History.

### Historical Studies Track

Graduate studies leading to the M.A. degree in art history are intended to train students to become creative and accomplished teachers and scholars in the discipline of art history. The program is designed to provide a comprehensive knowledge of the major areas and historical periods of art as well as the various research and methodological skills requisite to the field.

The requirements listed below are in conjunction with School of the Arts graduate admission and degree requirements.

### Admission requirements

In addition to the School of the Arts requirements, applicants should have completed a minimum of 21 undergraduate semester credits in art history with additional work in relevant humanities and social science courses, such as English, philosophy, foreign language and history. Applicants should include with their application an undergraduate research paper in art history to serve as a writing sample. Students whose undergraduate training is less extensive may be admitted provisionally and subsequently attain full graduate status.

### Degree requirements

A total of 30 credits in course work and thesis

credits

Art history (period courses)	21
Historiography and methodology	3
Thesis	6
	<hr/>
	30

At least 12 of the 21 art history credits must be taken at the 600 or 700 level. Students must earn a minimum grade of "B" in ARTH 590 Historiography in order to enroll in subsequent graduate-level art history courses.

Students must demonstrate a reading knowledge of German or any appropriate Romance language by passing a departmental exam. All students must take the relevant departmental language exam during the first academic semester. Requests to repeat the exam more than once in a given language require departmental approval.

Students also must demonstrate general programmatic competence in art history by passing a comprehensive examination, taken sometime toward the end of the course work.

The master's program culminates with a thesis, written under the direction of a departmental adviser and a thesis committee.

For more complete information and details on these procedures, contact the Department of Art History.

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## Museum Studies Track

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The program in museum studies stresses those attitudes and skills necessary to accomplish the major goals of any professional museum operation: to collect, preserve, exhibit and interpret the art and artifacts of the past and present within an extended curriculum and professional museum environment. The course of study also includes an internship for academic credit under the direct supervision and professional guidance of individuals in the field.

The curriculum provides a broad overview of historical developments, institutional responsibilities and theoretical issues relevant to contemporary museum practice. And it offers a practical and scholarly foundation upon which students may build curatorial careers that include exhibit and/or education program development.

## Admission requirements

In addition to the School of the Arts admission requirements, applicants should have completed a minimum of six credits in the survey of western art, nine credits of period studies and some undergraduate work in the humanities. Applicants should include with their application an undergraduate research paper in art history to serve as a writing sample. Any applicant whose training is less extensive may be provisionally admitted and subsequently may gain full graduate status upon completion of the deficiency.

## Degree requirements

	credits
Museum studies	12
Museum internship	3
Art history (period courses)	12
Art historiography and methodology	3
Museum project or thesis	6
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	36

At least nine of the 12 art history credits must be taken at the 600 or 700 level. Students must earn a minimum grade of "B" in ARTH 590 Historiography in order to enroll in subsequent graduate-level art history

courses.

Students must demonstrate a reading knowledge of German or any appropriate Romance language by passing a departmental exam. All students must take the relevant departmental language exam during the first academic semester. Requests to repeat the exam more than once in a given language require departmental approval.

Students also must demonstrate general programmatic competence in museum studies and art history by passing a comprehensive examination taken toward the end of the course work.

An internship at one of the cooperating local or regional museums is a degree requirement of particular importance, enabling students to apply their knowledge and to develop a personal awareness of effective museum exhibition procedures. As a culmination to the course of study, students may opt to plan and mount a major exhibition on campus or at a museum in lieu of a written thesis with the approval of the department.

## Department of Communication Arts and Design

The objective of this department is to develop the philosophy and personal direction of students through focusing their resources for functional and theoretical visual communications. The department offers study opportunities in graphic design, typography, computer graphics, time arts, interactive design, design theory and design education.

Students working in the Graduate Center for Visual Communications concentrate on the philosophical, communicative and aesthetic relationships of visual problem solving and the interactive skills leading to the effective articulation of concepts. Although problems in visual communications anticipate refinement of students' technical abilities, education in this program does not emphasize technical instruction.

## Administration

**Matthew Woolman**

Associate Professor and Acting Department Chair

## Department of Crafts

The Department of Crafts is housed in the new Fine Arts Building that includes private and semi-private graduate studios. These new facilities provide a safe and excellent physical environment in which to work. Graduate students have access to well-equipped studios in each of the five media areas along with a computer lab and wood shop. The building also houses the facilities for sculpture, painting and printmaking, and kinetic imaging. Interaction among departments is encouraged.

The Department of Crafts offers graduate course work leading to the Master of Fine Arts in Fine Arts degree in five disciplines: ceramics, fiber, furniture design, glassworking and jewelry/metalworking.

The M.F.A. is the terminal degree in the studio areas and is a requirement for most university teaching positions. Every effort is made to assist students in gaining valuable teaching experience while they are in the program. The department aids the students financially through a variety of scholarships and graduate assistantships. Opportunities exist for qualified students to teach courses during the academic year and in summer school.

## Administration

**Howard Risatti**

Acting Department Chair and Professor

**Department of Interior Design**

The Department of Interior Design offers a Master of Fine Arts in Design with a concentration in interior environments with a first-professional track and a postprofessional track. These tracks seek to produce competent creative designers whose design solutions are based on human response in the contemporary environment. Mastery of design skills, development of productive habits, knowledge of resources and an awareness of interrelated disciplines equip the student with the tools and expertise necessary to pursue creative design positions.

The department relates with the professional interior design community through a variety of activities. The faculty invites featured speakers to share experiences, participate in the annual ASID EXPO, facilitate mentorships with professional designers and support student internships. An active student chapter of the American Society of Interior Designers provides additional enriching opportunities for student involvement.

The department offers limited accelerated undergraduate preparation for those individuals who lack full preparation. Assessment of the individual candidate's needs will determine the scope of the preparatory course work. This is an opportunity to gain the skills and design experiences required to qualify for admission to the graduate degree program.

The department has a very comprehensive Web site with extensive information about the program, interior design in general, faculty, student work and the department newsletter. In advance of scheduling a meeting for department advising or for application to the program, students should review the Web site at <http://www.vcu.edu/artweb/interiors>.

**Administration****Vacant**

Department Chair

**Department of Music**

The Department of Music offers the Master of Music degree with tracks in performance (including conducting), music education and composition.

**Admission to the performance and composition tracks currently are suspended.** This degree program allows the student maximum curricular flexibility within the parameters of the program's full accreditation by the National Association of Schools Music. The faculty adviser and Graduate Committee are a resource in designing a curriculum that advances the student toward individually defined professional and artistic goals.

Participating in the VCU musical community means involvement in a musically rich environment of studio lessons, small classes, independent study and participation in performing organizations, as well as hearing outstanding professional performers in the classical and jazz traditions. On-campus master classes with major touring artists are an important adjunct to the regular instructional program. Student soloists also may appear with regional and university ensembles. Through the Mary Anne Rennolds Chamber Concerts and other events, the department is one of the region's major sponsors of music performances.

Approximately 330 students choose to major in music, with many other students from throughout the university taking courses and participating in ensembles. There are 20 full-time faculty, over half of whom hold doctorates, in addition to 45 part-time instructors. Among the faculty are internationally recognized performers, composers, researchers and teachers — musician-educators who are active in all facets of the

professional music world. The faculty includes members and regular performers with ensembles that include the Richmond and Virginia Symphonies, the New York Philharmonic, the Virginia Opera, Rhythm and Brass, the Great American Music Ensemble and National Chamber Players. The faculty maintains a high level of recognition through each individual's publications, recordings, and international performances and lectures.

The department is housed in three buildings. The principal facility is the W.E. Singleton Center for the Performing Arts, which includes the 502-seat Sonia Vlahcevic Concert Hall, faculty offices, rehearsal rooms and special studios for organ, percussion and piano. The Bowe House contains additional faculty offices and teaching studios. The Music Center has a 347-seat recital hall, classrooms, practice rooms, rehearsal spaces and faculty offices and studios.

The objective of the music education program at VCU is to assist and enhance public and private school music specialists' ability to teach music effectively to every child. Toward this goal, music educators are stimulated by current research in music to seek, evaluate and appropriately implement current ideas and developments in teaching music.

**Administration****John Guthmiller**

Professor and Department Chair

**Music, Master of (M.M.)****Admission requirements summary****Music, Master of (M.M.)**

Applications/admissions in Performance and Composition are suspended until further notice.

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.M.	Summer only	Apr 1	

**Special requirements:**

Review of transcripts, a writing sample, recommendations and interview with the director of music education are required.

The Department of Music offers the Master of Music degree with a track in music education. Selection is made on the basis of prior academic performance reflected in undergraduate (and prior graduate) transcripts, an audition or interview, and a writing sample. The applicant should have completed the appropriate undergraduate program (a bachelor's degree in music education with certification) or the equivalent for admission as a graduate student.

Prospective music education majors should submit a vita/resume, which includes education, background, teaching experience, honors and awards, publications, and any other important information. Applicants also should submit a writing sample on their "Personal Philosophy of Music Education." An interview will be scheduled with the music education faculty prior to admission.

Music education students have the option of a thesis or project. Specific information regarding the preparation of research documents and projects is available from the director of music education.

**Curriculum**

<b>Master of music</b> (music education)	credits
Music education cognate	13



MUED 600 Seminar in Music Education, three credits;  
 MUED 610 Psychology of Music, three credits, MUED  
 620 Introduction to Research in Music Education, three  
 credits; MUED 799 Thesis (or project), four credits

Music pedagogy cognate 10

To be determined by student and adviser, with adviser  
 approval. May include MUSC 611, 612, 690, and other  
 graduate-level MUSC, MHIS, APPM, MUED courses

Professional education cognate 11-14

A focus on areas of education of interest to student — to  
 be determined by student and adviser, with adviser  
 approval. May include EDUS 605, 607, 662, 673, 701;  
 ADMS 600, 606, 611; ADLT 631; and other School of  
 Education graduate-level offerings

30

## Department of Painting and Printmaking

The Department of Painting and Printmaking offers a graduate program of study leading to the M.F.A. in Fine Arts degree. Students admitted to the program are expected to have achieved a high level of competence in either painting or printmaking. The graduate program is designed to encourage the development of professional attitudes and skills, with an emphasis on individual investigation.

The painting and printmaking graduate program is housed in the new Fine Arts Building with 15 individual graduate studios plus a large graduate printmaking area. Graduate students also have access to four state-of-the-art undergraduate printmaking studios: etching, lithography, screenprinting and digital. These new facilities provide an excellent physical environment for the graduate program with easy access to the other fine art areas of sculpture and crafts. The School of the Arts is ranked among the top 20 graduate fine arts programs in the country by U.S. News & World Report. This ranking is based on the professional reputation of the program's faculty and on the outstanding accomplishments of the students. Established in 1928, the Department of Painting and Printmaking was the first department in what has become the School of the Arts. For nearly 70 years, the department has made significant contributions to the development of the School of the Arts' reputation as one of the premier art schools in the country.

The Department of Painting and Printmaking supports an active and ambitious program of visiting artists and lecturers. Leading figures in the world of contemporary art visit to discuss their work, critique, visit studios, conduct workshops and meet with students throughout the year.

The Master of Fine Arts degree is the terminal degree in the studio areas of fine arts and is a requirement for most college and university teaching positions. Many graduate students have gained teaching experience in the department as part of their assistantship responsibilities, teaching classes in painting, drawing and printmaking. The department assists graduate students financially through a variety of teaching assistantships, graduate assistantships and scholarships.

### Administration

**Richard Roth**  
 Professor and Department Chair

## Department of Photography and Film

Through the graduate program, the Department of Photography and Film seeks to advance the highest standards of the media of photography and film by encouraging the creative and professional growth of both its students and faculty. The goal is to provide a forum for the development and exchange of visual ideas and to encourage its members to translate

these ideas through each medium with a high degree of sensitivity and proficiency. The department fosters a pluralistic approach that allows both faculty and students to expand the traditional boundaries of the respective media, explore a broad range of conceptual orientations and engage in multidisciplinary practice.

To promote student development and research of contemporary art practice and theory, the Department of Photography and Film presents a diverse and active Visiting Artist Program. Through lectures, critiques and research courses, graduate students are exposed to the valuable insights of respected international artists, scholars and critics. In addition, the visiting artists teach topics courses exploring the current artistic and conceptual foundations found in their own work. Students are encouraged to establish an individual critical dialogue with the visiting artists and faculty. Graduate students are expected to attain a strong critical and historical basis for their work, and many of them are given the opportunity to teach undergraduate courses.

The graduate facilities include a critique/lounge room and a graduate workspace. In addition, graduate students have access to department facilities: a large black-and-white darkroom; two complete state-of-the-art digital photography and film editing labs that together include 18 Mac G5, 15 Mac G4 and eight PC computers; four Epson 1280 scanners, three medium-format Nikon 9000 film scanners and two additional film scanners; a shooting studio; a student checkout center with a wide range of still photography and film cameras, professional lights and sound recording equipment; a professionally staffed graphics lab located in the same building that provides student digital services on several high-tech imaging devices, such as a 60-inch Encad Novajet printer.

### Administration

**James T. Long**  
 Associate Professor and Department Chair

## Department of Sculpture

The sculpture department provides an environment of high expectation regarding self-motivation, intellectual capacity and responsibility in order to establish those conditions that promote the student's ability to construct a thinking self. Students are encouraged to explore technology's parameters and discover applications to new and traditional modes of expression while continuing to examine the links between art, science, the humanities and the conditions of the world.

### Mission

The department's mission is to provide students with the seeds of discernment, the vocabulary and the skills of analysis and synthesis to become participants in today's dialogue.

### Faculty

The department has six full-time and numerous part-time faculty who represent various directions and attitudes relative to the making of art.

### Studio space

The graduate sculpture program is housed in a new state-of-the-art facility. Students are provided with a generous amount of studio space and are given time, support and encouragement to pursue their independently determined goals.

### Administration

**Amy Hauft**

Professor and Department Chair

## Department of Theatre

The mission of the VCU Department of Theatre is to educate and to train students as theatre professionals and/or academicians in the field of performance, design/technology or theatre education/pedagogy.

### Administration

**David Leong**

Professor and Department Chair

## Theatre, Master of Fine Arts (M.F.A.)

### Admission requirements summary

#### Theatre, Master of Fine Arts (M.F.A.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.F.A.	Fall only for costume and scene design	May 1 for fall	
	Any semester for theatre pedagogy		

#### Special requirements:

Audition or portfolio and personal interview required. Contact department for additional admission requirements. There are a limited number of students admitted each year. Early applicants will be given first priority.

Send application to Graduate School with supporting documentation, including resume and sample of research paper. Include self-addressed, stamped envelope for return of portfolio.

The Department of Theatre offers intensive Master of Fine Arts degree programs in two tracks, the professional theatre degree track and the theatre pedagogy degree track. The professional degree program is offered in the areas of scenic design and costume design, to prepare designers for careers in regional repertory theatre and commercial production companies. The M.F.A. in Theatre Pedagogy Program is individually tailored to prepare the student to enter the field of teaching at the university or college level. Areas of concentration can be chosen from acting, directing, scene design, costume design, voice and speech, movement and choreography, and dramatic literature and dramaturgy.

The Master of Fine Arts program is based on the philosophy that the nature of theatre requires the creative collaboration of all theatre artists working together. All share the responsibility of solving problems related to planning, preparation and realization of productions.

### Admission requirements

In addition to the School of the Arts admission requirements, applicants in theatre must have completed a minimum of 30 semester hour credits in theatre at the undergraduate level. Professional experience will be considered.

Applicants are admitted only upon satisfactory demonstration of ability and genuine interest through audition or portfolio presentation, interview, evidence of scholarly writing (essay or research paper) and a minimum 3.0 GPA. The demands of the program are stringent; and only those students who are willing to commit themselves to the work assigned and who are capable of observing strict professional discipline should apply.

An audition or presentation of portfolio is required in addition to a personal interview that the applicant must arrange with the Department of Theatre's graduate studies adviser.

#### Special admissions requirements – professional tracks

##### Acting and directing

Applicants for acting and directing must present upon entrance at least six credit hours of undergraduate production or technical theatre course credit or the equivalent in professional experience.

##### Design

Applicants in costume and stage design must present upon entrance at least six credit hours of undergraduate performance course credit or the equivalent in professional experience.

#### Special admissions requirements – theatre pedagogy track

Applicants in theatre pedagogy must present upon entrance at least three credit hours of undergraduate design or technical theatre or the equivalent in professional experience.

Deficiencies in any of these special admissions requirements may be satisfied at VCU, but no graduate credit will be given for them. These prerequisites must be satisfied before the student may apply for candidacy.

### Candidacy

After the completion of 15 and before the completion of 24 semester hours, or one full academic year, whichever comes first, the student seeking an advanced degree from the Department of Theatre must apply for candidacy. In addition to maintaining a minimum 3.0 GPA, prior to applying for candidacy, candidates for the professional degree focus options in acting must have completed two roles, at least one with a faculty director (this requirement may be completed in part by the acting practicum required during the first year of matriculation); in directing must have completed one directing assignment (which may be an assistant to the director assignment and which may be accomplished in the directing practicum required during the first year of matriculation); in scene design must have served in a design position of substantial authority for at least one production (which may be accomplished in the scene design practicum during the first year of matriculation); in costume design must have completed two costume design classes and served in a position of designated authority (which position may be accomplished in the costume design practicum during the first year of matriculation). Candidates for the theatre pedagogy degree must have completed one assignment as well as completed the theatre pedagogy practicum in classroom observations.

In addition to the requirements listed previously for the various area specialties, the process of evaluation for advancement to candidacy may require the presentation of a portfolio and/or audition; written, oral and/or practical testing; and other devices deemed by the Department of Theatre to be serviceable measurements to determine the prospective success of the candidate at the advanced level in the program. Each candidate for the Master of Fine Arts in Theatre may stand for evaluation for admission to candidacy a second time if the initial evaluation for candidacy is unsuccessful. If after the second evaluation the student is denied candidacy, he or she is obliged to withdraw from the program. In special circumstances where unusual strength in another area is evidenced and when the student is acceptable to the graduate faculty, the student may be invited to transfer into another degree option. The completion of 18

semester hours is the latest point at which a student may transfer into another degree option without lost credits.

## Core degree requirements

Candidates in all degree track options for the M.F.A. in Theatre must satisfy the following core requirements:

	credits
THEA 509, 510, 603, 604	12
Two courses from the following:	6
THEA 623, 624 (selected topics in dramatic literature) and THEA 791 (Seminar)*	
Creative project/thesis	6

\* Seminar subjects may include dramaturgy, African-American theatre, women's theatre, history of Shakespearean production, Asian theatre practice, political theatre, research/performance or other topics.

## Professional theatre track

**Professional studio: Costume design** 60  
To be repeated six times for a total of 60 credits  
Program includes:

Costume design  
Costume history  
Rendering  
Computer drafting  
Scene design  
Scene painting  
Practica

**Professional studio: Scene design** 60  
To be repeated six times for a total of 60 credits  
Program includes:

Stage design  
Scene painting  
Costume design or lighting design  
Directing  
Computer drafting  
History of interior design and architecture  
Practica  
Professional internships  
Core  
Project and project evaluation

## Theatre pedagogy track

**Theatre pedagogy** 60  
Program includes:

Directing, acting, voice, dramatic literature/dramaturgy or physical acting	9-12 credits
Electives, including design	12 credits
Core (includes theatre pedagogy)	21 credits
Internship or teaching practicum	12 credits
Thesis	3-6 credits

Theatre pedagogy candidates select a major area specialty, present a minor area and participate in practicum situations both in the department and with community theatre companies.

# School of Business

Virginia Commonwealth University's School of Business can be traced back to 1917 when a board of private citizens organized the Richmond School of Social Economy for Social Workers and Public Health Nurses. By 1937 the school was called the Richmond Professional Institute, was affiliated with The College of William and Mary, and had added business courses to the curriculum. The school began offering a graduate program in 1962. Since then, the program has continued to develop and mature to meet the needs of the future.

## Administration

1015 Floyd Ave.  
P.O. Box 844000  
Richmond, VA 23284-4000  
(804) 828-1595  
Fax (804) 828-8884  
<http://www.bus.vcu.edu>

**Michael Sesnowitz**  
Dean

**E. G. Miller**  
Senior Associate Dean

**Allen S. Lee**  
Associate Dean for Research and Graduate Studies

**Walter S. Griggs Jr.**  
Associate Dean for Undergraduate Studies

**Jana P. McQuaid**  
Director of Graduate Studies

**William J. Miller**  
Executive Director, Fast Track Executive M.B.A. Program

## Accreditation

Business and Accounting (all degrees)  
AACSB International – Association to Advance Collegiate Schools of Business

Information Systems (bachelor's degree)  
Accreditation Board for Engineering and Technology (ABET)

## Policies

### Enrollment in graduate courses

Because of accreditation policies, students may not enroll in any graduate business courses (except MGMT 500) for credit without first being admitted formally to a graduate degree or graduate certificate program.

Exceptions may be granted by the director of graduate studies in business to students with superior academic records. No credit will be given for graduate classes taken prior to acceptance into a graduate degree program in business or economics unless such an exception has been granted. A form to request such an exception is available from the Graduate Studies in Business Office.

A "graduate transient" classification may be granted to a student in good standing in any graduate school accredited by the Association to Advance Collegiate Schools of Business (AACSB) who desires to enroll in the School of Business for any one semester or summer session. Students will be required to present certificates of graduate standing but will not have to submit the data normally required for an admission decision. A form is available from the Graduate Studies in Business Office to facilitate

transient enrollment.

### Transfer credit

A maximum of six semester hours of acceptable graduate credit earned in a degree program at an AACSB-accredited institution may be transferred and applied toward the graduate degree. Acceptance of transfer credit is made at the discretion of the director of graduate studies in business.

All transfer work must be at the "A" or "B" grade level. Students must be in good standing both at VCU and at the institution from which the credits were earned. Additionally, students must have had full admission during the time these credits were earned at that college or university. Transfer credit shall not be older than seven years at the time the degree is awarded.

Credit to be earned at other institutions after acceptance in the graduate program must be approved in advance, and approval is granted at the discretion of the director of graduate studies in business. Such work is approved only under unusual circumstances such as job transfers or other extenuating circumstances.

### Advising program

All students admitted to graduate programs are assigned advisers. Students are expected to work with their advisers to plan their graduate programs. Each student is required to complete an approved program form and file it with the Graduate Studies in Business Office no later than the end of the first semester in which the student is admitted. The curriculum plan described on the form must be approved by both the adviser and the director of graduate studies in business. Courses taken without approval are taken at the student's own risk.

Students are responsible for knowing and fulfilling all general and specific requirements relating to the completion of their degree programs. Answers to specific questions may be obtained from the Graduate Studies in Business Office, (804) 828-4622.

### Change in program or concentrations

Students who wish to change their graduate programs or areas of concentration within the school must make that request in writing to the director of graduate studies in business. The director will advise them of the necessary requirements and whether the change is possible. The student must be in good standing at the time of change.

### Notification

The student should notify in writing both Records and Registration and Graduate Studies in Business, 1015 Floyd Ave., P.O. Box 844000, Richmond, VA 23284-4000, of any address changes. Students who do not wish to register in any given semester must notify in writing the Graduate Studies in Business Office of their intent not to register and their plans for continuation in the program.

### Student appeals

Appeals for exceptions to policies or academic standards may be made in writing to the Graduate Studies in Business Office, School of Business, Virginia Commonwealth University, 1015 Floyd Ave., Richmond, VA 23284-4000.

## Individual research projects

Various opportunities exist for students to work closely with faculty on individual research projects. Courses in the School of Business numbered 690, 693 and 697 are suitable for this purpose. No more than one research course may be taken as part of a master's program.

Registration in all research courses requires approval of both the student's adviser and the director of graduate studies in business. Forms for this purpose are available upon request from the Graduate Studies in Business Office. Students are expected to seek permission to register in research courses by the end of the semester or summer session preceding the semester or summer session for which registration is desired. The written research report is required to be filed at the Graduate Studies in Business Office no later than the last day of classes of the semester or summer session in which the course is taken.

## Financial aid

The School of Business offers a limited number of graduate assistantships to full-time students for the academic year. For further information, write to the Graduate Studies in Business Office.

Graduate students also are eligible for funds administered under the National Defense Loan and college work-study programs. For further information, write to Director of Financial Aid, Virginia Commonwealth University, Richmond, VA 23284-2526.

## Graduate courses in business and economics

The School of Business courses are grouped into seven categories: accounting; economics; finance, insurance and real estate; fast track M.B.A.; information systems; management; marketing and business law.

Courses at the 500 level may not be included in the 36 semester credits of advanced work required of any of the master's degrees offered by the School of Business.

## General requirements for master's degrees

In addition to the general academic regulations stated in the Graduate Studies at VCU chapter of this bulletin and the regulations listed earlier in this section, master's students in the School of Business are subject to the following requirements:

1. A course for which a passing grade was received cannot be repeated without prior written permission of the director of graduate programs in business. An appeal to the School of Business Master's Committee is required.
2. Students who satisfy all requirements except the 3.0 average may be allowed to take a maximum of six additional credit hours to raise the average. Students are required to appeal to the School of Business Master's Committee for permission.
3. A foundation course may be waived by the director of graduate studies in business, based on satisfactory completion of equivalent undergraduate work prior to acceptance in the program. CLEP credit at the "B" or higher level may be accepted in lieu of foundation courses with permission. The waiver of courses is at the discretion of the School of Business.
4. A maximum of two one-year extensions may be granted by the director of graduate studies in business in the time allowed to complete a degree if satisfactory progress has been demonstrated on

the part of the student requesting an extension. For extensions, write to the director of graduate programs in business.

5. Students are not permitted to take undergraduate courses equivalent to foundation courses once they are admitted to the graduate program without the written permission of the director of graduate studies in business.
6. Grades received for undergraduate courses are not included in the calculation of the cumulative graduate GPA.
7. All students admitted into a program must have earned a bachelor's degree or its equivalent. To be accepted in the graduate program, in addition to other requirements, applicants must be in good standing at the college or university they previously attended.

## Graduate programs

The School of Business offers degree programs leading to the [Master of Arts in Economics](#), [Master of Accountancy](#), [Master of Business Administration](#), [Master of Business Administration/Master of Science in Information Systems](#), [Master of Science in Business](#), [Master of Science in Information Systems](#), [Master of Taxation](#), and the [Ph.D. in Business and Pharm.D./M.B.A.](#)

## Accounting, Master of Accountancy (M.Acc.)

### Admission requirements summary

#### Accounting, Master of Accountancy (M.Acc.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.Acc.	Fall	Jul 15	GMAT
	Spring	Nov 15	
	Summer	Mar 15	

The purpose of the Master of Accountancy program is to provide the skills and knowledge necessary to be future leaders in the professional business community and the public sector for students who wish to specialize in the areas of accounting/information systems, auditing financial reporting and accounting/other fields of business.

The Master of Accountancy offers 150-hour professional program leading to a Bachelor of Science and Master of Accountancy, a program for applicants with a bachelor's degree in accounting and a program for applicants with a bachelor's degree in fields other than accounting.

### 150-hour professional program

The integrated 150-hour professional program gives students the opportunity to earn both a Bachelor of Science and Master of Accountancy degrees upon completion of the required 150 credit hours of study. It is an integrated program consisting of 120 hours of undergraduate credits and 30 hours of graduate credits. A student declares his/her major in accounting at the end of the sophomore year. He/she enters the 150-hour program at the beginning of the junior year and earns both degrees with a major in accounting and a concentration in information systems, finance and auditing, or another area of business. The 30 graduate credits consist of 10 courses, at least five of which the student may select from an area outside of accounting. The flexibility of electives gives students the ability to design a broad program, which supports and enhances career objectives.

A student can be guaranteed admission to the program in one of two ways:

1. Students who are participants in the University Honors Program and maintain the required scholastic standards throughout the freshman and sophomore years are guaranteed admission into the 150-hour program at the end of the sophomore year.
2. Students who rank in the top 15 percent of their high school class or who have a minimum unweighted 3.0 GPA, have a minimum combined SAT score of 1260 obtained in a single setting, and have a VCU undergraduate cumulative GPA of at least 3.5 at the end of their sophomore year are guaranteed admission.

Students who do not meet the criteria for guaranteed admission may seek admission to the program by submitting a complete application form for graduate study, including GMAT test score. Students who apply in this manner may be admitted, depending upon the cumulative GPA at the completion of the university general education requirements and the business foundation requirements along with satisfactory performance on the GMAT.

#### Finance and auditing track

Recommended course sequence for the 150-hour program with a finance and auditing track:

	credits	
	fall	spring
<b>First year</b>		
ENGL 101 and 200 Writing and Rhetoric Workshop I and II	3	3
MGMT 171 and 212 Applications and Calculus	3	3
Human behavior elective	3	-
Choose from anthropology, psychology or sociology		
Institutional studies elective	3	-
POLI 103 Introduction to Political Science		
Natural science elective	4	-
Choose from biology and laboratory, chemistry and laboratory, or physics and laboratory		
Restricted elective	-	3
Non-business elective	-	6
	16	15
<b>Second year</b>		
Literature and language	3	-
ENGL 201 or foreign language or philosophy elective		
ACCT 203 and 204 Introduction to Accounting I and II	3	3
ECON 210 and 211 Principles of Economics I and II	3	3
INFO 360 Business Information Systems	3	-
MGMT 301 Business Statistics	3	-
SPCH 121 or 321 Effective Speech or Speech for Business and Professions	-	3
ENGL 304 Advanced Composition	-	3
Visual and performing arts elective	-	2
	15	14

Note: Upon completion of the foundation program, students are expected to have competency in computer-based word processing and spreadsheet skills. Students without this competency must complete INFO 160, 161 or 162, or equivalent.

#### Third year

ACCT 303 and 304 Intermediate Accounting	3	3
ACCT 307 Accounting Systems	-	3
MGMT 319 Organization and Management	3	-
MGMT 320 Production Operations	-	3
MRBL 308 Introduction to Marketing	3	-
FIRE 311 Financial Management	3	-
ECON 303 Managerial Economics	-	3
FIRE 312 Intermediate Financial Management	-	3
MGMT 325 Organizational Communication	3	-
	15	15

Note: If INFO 161 and 162 are taken during the sophomore year instead of a non-business elective, then a non-business elective should be substituted for a business elective during the junior year.

#### Fourth year

ACCT 306 Cost Accounting	3	-
MRBL 481 Business Law for Accountants I	-	3
ACCT 405 Tax Accounting	-	3
ACCT 506 Auditing	3	-
MGMT 434 Strategic Management	3	-
FIRE 314 Investments	-	3
ACCT 401 Government and Not-for-profit Accounting	-	3
MGMT 524 Quantitative Management	-	3
ACCT 513 Financial Reporting	3	-
Non-business elective	3	-
	15	15

#### Fifth year

ACCT 604 Auditing	3	-
FIRE 621 Cases in Financial Management	3	-
FIRE 635 Investments and Security Analysis	3	-
FIRE 650 Derivatives	3	-
FIRE 623 Corporate Finance	-	3
ACCT 682 Corporate Taxation	-	3
ACCT 601 Accounting Theory	3	-
Undergraduate non-business elective	3	-
Graduate accounting elective	-	3
Graduate elective (accounting or finance)	3	-
	15	15

#### General business track

Recommended course sequence for the 150-hour program with other business track:

	credits	
	fall	spring
<b>First year</b>		
ENGL 101 and 200 Writing and Rhetoric Workshop I and II	3	3
MGMT 171 and 212 Applications and Calculus	3	3
Human behavior elective	3	-
Choose from anthropology, psychology or sociology		
Institutional studies elective	3	-
POLI 103 Introduction to Political Science		
Natural science elective	4	-
Choose from biology and laboratory, chemistry and laboratory, or physics and laboratory		
Restricted elective	-	3
Non-business elective	-	6
	16	15
<b>Second year</b>		
Literature and language	3	-
ENGL 201 or foreign language or philosophy elective		
ACCT 203 and 204 Introduction to Accounting I and II	3	3
ECON 210 and 211 Principles of Economics I and II	3	3
INFO 360 Business Information Systems	3	-
MGMT 301 Business Statistics	3	-
SPCH 121 or 321 Effective Speech or Speech for Business and Professions	-	3
ENGL 304 Advanced Composition	-	3
Visual and performing arts elective	-	2
	15	14

Note: Upon completion of the foundation program, students are expected to have competency in computer-based word processing and spreadsheet skills. Students without this competency must complete INFO 160, 161 or 162, or equivalent.



**Third year**

ACCT 303 and 304 Intermediate Accounting	3	3
ACCT 307 Accounting Systems	-	3
MGMT 319 Organization and Management	3	-
MGMT 320 Production Operations	-	3
MRBL 308 Introduction to Marketing	3	-
FIRE 311 Financial Management	-	3
ECON 303 Managerial Economics	-	3
Undergraduate track (300 level)	3	-
MGMT 325 Organizational Communication	3	-
	15	15

Note: If INFO 161 and 162 are taken during the sophomore year instead of a non-business elective, then a non-business elective should be substituted for a business elective during the junior year.

**Fourth year**

ACCT 306 Cost Accounting	3	-
MRBL 481 Business Law for Accountants I	-	3
ACCT 405 Tax Accounting	-	3
ACCT 506 Auditing	3	-
MGMT 434 Strategic Management	3	-
Undergraduate track (400 level)	3	-
ACCT 401 Government and Not-for-profit Accounting	-	3
MGMT 524 Quantitative Management	-	3
ACCT 513 Financial Reporting	3	-
Non-business elective	3	-
	15	15

**Fifth year**

ACCT 604 Auditing	3	-
Graduate track (600 level)	6	6
ACCT 682 Corporate Taxation	-	3
ACCT 601 Accounting Theory	3	-
Undergraduate non-business elective	3	-
Graduate accounting elective	-	3
Graduate elective (accounting or track)	3	-
	15	15

## Information systems track

Recommended course sequence for the 150-hour program with an information systems track:

	credits	
	fall	spring
<b>First year</b>		
ENGL 101 and 200 Writing and Rhetoric Workshop I and II	3	3
MGMT 171 and 212 Applications and Calculus	3	3
Human behavior elective	3	-
Choose from anthropology, psychology or sociology		
Institutional studies elective	3	-
POLI 103 Introduction to Political Science		
Natural science elective	4	-
Choose from biology and laboratory, chemistry and laboratory,		
or physics and laboratory		
Restricted elective	-	3
Non-business elective	-	6
	16	15

**Second year**

Literature and language	3	-
ENGL 201 or foreign language or philosophy elective		
ACCT 203 and 204 Introduction to Accounting I and II	3	3
ECON 210 and 211 Principles of Economics I and II	3	3
INFO 360 Business Information Systems	3	-
MGMT 301 Business Statistics	3	-
SPCH 121 or 321 Effective Speech or Speech for Business - and Professions		3

ENGL 304 Advanced Composition	-	3
Visual and performing arts elective	-	2
	15	14

Note: Upon completion of the foundation program, students are expected to have competency in computer-based word processing and spreadsheet skills. Students without this competency must complete INFO 160, 161 or 162, or equivalent.

**Third year**

ACCT 303 and 304 Intermediate Accounting	3	3
ACCT 307 Accounting Systems	-	3
MGMT 319 Organization and Management	3	-
MGMT 320 Production Operations	-	3
MRBL 308 Introduction to Marketing	3	-
CMSC 255 Structured Programming	3	-
ECON 303 Managerial Economics	-	3
INFO 361 Systems Analysis and Design	-	3
MGMT 325 Organizational Communication	3	-
	15	15

Note: If INFO 161 and 162 are taken during the sophomore year instead of a non-business elective, then a non-business elective should be substituted for a business elective during the junior year.

**Fourth year**

INFO 362 Computer Hardware and Software	3	-
ACCT 306 Cost Accounting	3	-
MRBL 481 Business Law for Accountants I	-	3
ACCT 513 Financial Reporting	3	-
ACCT 405 Tax Accounting	-	3
FIRE 311 Financial Management	3	-
ACCT 401 Government and Not-for-profit Accounting	-	3
MGMT 434 Strategic Management	3	-
INFO 464 Database Systems	3	-
INFO 370 Fundamentals of Data Communication	-	3
MGMT 524 Quantitative Management	-	3
	15	18

**Fifth year**

ACCT 506 Auditing	3	-
INFO 610 Analysis and Design of Database Systems	3	-
INFO 620 Data Communication	3	-
INFO 630 Information Engineering	-	3
INFO 640 Information Systems and Knowledge Management	3	-
ACCT 682 Corporate Taxation	-	3
ACCT 601 Accounting Theory	-	3
Undergraduate non-business elective	-	3
Graduate accounting elective	-	3
Graduate elective (accounting or information systems)	3	-
	15	15

### Program for students with a bachelor's degree in accounting

Students who have already completed a bachelor's degree in the field of accounting from an accredited institution may be admitted directly to the Master of Accountancy program. The graduate degree requires completion of 10 graduate courses. There are four 600-level required accounting courses and six 600-level courses selected from the three tracks of interest. Students applying directly to the Master of Accountancy program may be admitted depending upon the cumulative grade-point average obtained in the last 60 credits of course work, plus satisfactory performance on the GMAT.

## Program requirements

### Department of Accounting prerequisites:

ACCT 401 Governmental and Not-for-profit Accounting (if not previously taken)  
ACCT 506 Auditing  
ACCT 513 Financial Reporting

### Graduate accounting required core courses:

ACCT 601 Financial Accounting Theory  
ACCT 604 Auditing  
ACCT 606 International Accounting  
ACCT 682 Financial Reporting

### Graduate elective courses:

Students are permitted to select six 600-level courses from the three tracks of interest (information systems, finance and auditing, or general business). Students are encouraged to take the following elective courses for specialty training in the following three tracks. The final selection of elective courses that will be taken for graduation can be negotiated with the student's graduate academic adviser.

**Information systems** – students selecting this track may be required to complete additional undergraduate prerequisite courses before taking the graduate information systems electives.  
INFO 610 Analysis and Design of Database Systems  
INFO 620 Data Communication  
INFO 630 Information Engineering  
INFO 640 Information Systems and Knowledge Management  
One graduate elective in accounting  
One graduate elective in either accounting or information systems

#### Finance and auditing

FIRE 621 Cases in Financial Management  
FIRE 635 Investments and Security Analysis  
Two graduate electives in finance  
One graduate elective in accounting  
One graduate elective in accounting or finance

**Other approved business tracks** – students will work with their advisers to identify a separate track of study in one of the following approved areas: economics, international business, management, marketing or another area negotiated with the faculty adviser. Depending upon the track of study selected, students may have to complete additional undergraduate prerequisites. The number of graduate electives that must be taken is the same, regardless of the area of study:

- four graduate electives in selected track
- one graduate elective in accounting
- one graduate elective in accounting or selected track

## Program for students with a bachelor's degree in fields other than accounting

Students who have already completed a bachelor's degree in a field of study other than accounting from an accredited institution may be admitted directly to the Master of Accountancy program. The graduate degree requires completion of 10 graduate courses. There are four 600-level required accounting courses and six 600-level courses selected from the three tracks of interest. Students applying directly to the Master of Accountancy program may be admitted depending upon the cumulative

grade-point average obtained in the last 60 credits of course work, plus satisfactory performance on the GMAT.

## Program requirements

### School of Business foundation requirements (up to 12 semester credits)

ACCT 507 Fundamentals of Accounting

And three of the following courses, depending upon track of interest:

ECON 500 Concepts in Economics  
FIRE 520 Financial Concepts of Management  
MGMT 500 Quantitative Foundation for Decision Making  
MGMT 524 Statistical Elements of Quantitative Management  
MGMT 540 Management Theory and Practice  
MRBL 530 Fundamentals of the Legal Environment of Business  
MRBL 570 Concepts and Issues in Marketing

### Department of Accounting prerequisites (up to 21 semester credits)

ACCT 303 Financial Accounting I  
ACCT 304 Financial Accounting II  
ACCT 306 Cost Accounting  
ACCT 401 Governmental and Not-for-profit Accounting  
ACCT 405 Tax Accounting  
ACCT 506 Auditing  
ACCT 513 Financial Reporting

### Graduate accounting required core courses

All master's students must complete the following four graduate courses:

ACCT 601 Financial Accounting Theory  
ACCT 604 Auditing  
ACCT 606 International Accounting  
ACCT 682 Corporate Taxation

### Graduate elective courses

Students permitted to select six 600-level courses from the three tracks of interest (information systems, finance and auditing, or general business). Students are encouraged to take the following electives for specialty training in the tracks. The final selection of elective courses that will be taken for graduation can be negotiated with the student's graduate academic adviser.

**Information systems** – students selecting this track may be required to complete additional undergraduate prerequisite courses before taking the graduate INFO electives:  
INFO 610 Analysis and Design of Database Systems  
INFO 620 Data Communication  
INFO 630 Information Engineering  
INFO 640 Information Systems and Knowledge Management  
One graduate elective in accounting  
One graduate elective in either accounting or information systems

#### Finance and auditing

FIRE 621 Cases in Financial Management  
FIRE 635 Investments and Security Analysis  
Two graduate electives in finance  
One graduate elective in accounting  
One graduate elective in accounting or finance

**Other approved business tracks** – students will work with their advisers to identify a separate track of study in one of the following approved areas: economics, international business, management, marketing or another area negotiated with the faculty adviser. Depending upon the track of study selected, students may have to complete additional undergraduate prerequisites. The number of graduate electives that must be taken is the same, regardless of the area of study:

- four graduate electives in selected track
- one graduate elective in accounting
- one graduate elective in accounting or selected track

## Business Administration, Certificate in (Post-baccalaureate graduate certificate)

### Admission requirements summary

#### Business Administration, Certificate in (Post-baccalaureate graduate certificate)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Certificate	Fall Spring Summer	Jul 15 Nov 15 Mar 15	

The Post-baccalaureate Certificate in Business Administration is designed for professional who seek an opportunity for advanced study in core business function areas. The certificate provides students the ability to advance their careers while receiving recognition for academic accomplishment in the form of a graduate certificate. By completing the curriculum for the certificate, students will have satisfied the foundation course requirements in the M.B.A. and other master's programs in business.

### Admissions criteria

Applicants must have earned a baccalaureate degree or its equivalent from an accredited college or university. Other admission requirements include a minimum undergraduate GPA of 2.7 in at least 60 hours of course work. Work experience is preferred. If students have not previously completed MGMT 500 Quantitative Foundation for Decision Making and INFO 360 Business Information Systems, or their equivalents, they are expected to complete these courses before completion of the certificate requirements.

### Certificate requirements

In order to be eligible to receive the certificate, a student must maintain an overall GPA of 3.0. Completion of this graduate certificate program requires 21 credit hours beyond the bachelor's degree. The director of graduate studies in the School of Business may waive up to 12 credit hours based upon equivalent course work completed in the past five years with a grade of "B" or better. Successful completion of the graduate certificate program does not guarantee admission to a master's-level program. Students interested in applying at a later date to either the M.B.A. or other master's programs must do so through a separate application process.

### Curriculum

#### Co-requisites:

credits

MGMT 500 Quantitative Foundation for Decision Making	3
INFO 360 Business Information Systems	3
<b>Required courses</b>	<b>3</b>
ACCT 507 Fundamentals of Accounting	3
MRBL 570 Concepts and Issues in Marketing	3
MGMT 540 Management Theory and Practice	3
FIRE 520 Financial Concepts of Management	3
ECON 500 Concepts in Economics	3
MRBL 530 Fundamentals of the Legal Environment of Business	3
<b>Total</b>	<b>21</b>

## Business Administration, Master of (M.B.A.)

### Admission requirements summary

#### Business Administration, Master of (M.B.A.)

Indicate specialization: without concentration or with concentration

For M.B.A. with a concentration, indicate track: Accounting, Decision Sciences, Economics, Finance, Human Resource Management and Industrial Relations, Information Systems, Marketing, Real Estate and Urban Land Development, or Risk Management and Insurance

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.B.A.	Fall	Apr 1 (for early decision Jul 15 (final deadline)	GMAT
	Spring	Nov 1	
	Summer	Mar 1	

The purpose of the Master of Business Administration programs at VCU is to prepare individuals for the responsibilities of management. As students at VCU, individuals will learn the functions and techniques of effective management. The student also will come to understand the environmental and economic factors that affect decision making in organizations. In short, the student will know what to do as future events unfold that affect his/her firm or organization.

An M.B.A. from VCU benefits students at various points in their career. Individuals who have recently received their baccalaureate may choose to refine their business skills while their undergraduate training is fresh. Individuals with work experience often find that an M.B.A. is the key to rapid promotion or a career change. Finally, an M.B.A. from VCU meets the needs of students who recognize that the best preparation for an uncertain future is continuous learning.

School of Business students have diverse interests, backgrounds and levels of business experience. Therefore, the school provides a choice of programs by which the students may obtain an M.B.A. The M.B.A. is designed for students who wish to attend school in the evening on either a full- or part-time basis. The dual M.B.A./M.S. Information Systems degree program allows students to pursue both degrees simultaneously. The Fast Track Executive M.B.A. program is designed for applicants with at least six years of business experience who are interested in attending class on the weekends. The Pharm.D./M.B.A. is designed for students who want to add business skills to their training as pharmacists.

### The M.B.A. program

The curriculum for the M.B.A. program is flexible and is designed for students with diverse undergraduate backgrounds. The M.B.A. student may elect an M.B.A. without a concentration or may prefer an M.B.A. with

a single or double concentration. Concentrations are available in nine areas: accounting, decision sciences, economics, finance, human resource management and industrial relations, information systems, marketing, real estate and urban land development, or risk management and insurance.

Most classes are held in the evening to accommodate working students' schedules. Classes typically meet one evening a week from 7 to 9:40 p.m. A limited number of classes meet twice a week, either in the morning from 7 to 8:15 a.m., or in the early evening from 5:30 to 6:45 p.m. M.B.A. courses also are offered at Innsbrook, an office park and residential area in the suburban west end of Richmond.

Students may choose to include international study or an exchange program in their course of study. In recent years, credit has been earned for programs in Italy, China, France, Germany, Hong Kong, Indonesia and Mexico.

#### Admission criteria

Admission criteria include undergraduate performance, Graduate Management Admissions Test (GMAT) scores, intellectual capacity, experience and other indicators of the ability to pursue graduate study profitably. Deadlines are as follows:

Spring	Nov 1
Summer	Mar 1
Fall	Apr 1/early decision
	Jun 1/final deadline

#### Requirements for the M.B.A.

- A course in calculus is a prerequisite for the M.B.A. This prerequisite may be waived for students who present satisfactory equivalent preparation. Applicants who have not met this prerequisite may take the course after admission.
- Students are expected to enter the program with basic computing proficiency. Specific expectations will be provided by the Graduate Studies in Business Office. Specific means of evaluating and correcting any deficiency also will be identified.
- The program includes seven foundation courses. These courses may be waived for students who have taken the equivalent material at the undergraduate level within the last five years and received a grade of "B" or better. These courses must be taken at the graduate level after the student has been admitted.

Foundation courses	credits
ACCT 507 Fundamentals of Accounting	3
ECON 500 Concepts in Economics	3
FIRE 520 Financial Concepts of Management	3
MGMT 524 Statistical Elements of Quantitative Management	3
MGMT 540 Management Theory and Practice	3
MRBL 530 Fundamentals of the Legal Environment of Business	3
MRBL 570 Concepts and Issues in Marketing	3

21

#### Advanced courses

Each student must begin the advanced portion of the program with the courses below in each of the first two semesters. Full-time students will take additional courses from the remainder of the Advanced Program.

Semester one (to be taken at the same time)	
INFO 661 Information Systems for Managers	3
MGMT 641 Organizational Leadership and Project Team Management	3

Semester two (to be taken at the same time)	
MGMT 675 Operations Management and Decision Technology	3
One of the following courses:	3
ECON 610 Managerial Economics	
INFO 664 Emerging Information Technologies	
MRBL 671 Marketing Management	

#### Remainder of the Advanced Program (including courses not taken in semester two)

ACCT 608 Managerial Accounting	3
ECON 610 Managerial Economics	3
FIRE 621 Cases in Financial Management	3
INFO 664 Emerging Information Technologies	3
MGMT 642 Business Policy (to be taken 3 after completion of 15 credits of advanced program)	
MRBL 671 Marketing Management	3
Electives*	9

Total credits in Advanced Program 36

\* Electives must be 600-level courses. A student's choice of electives must include one or more courses that are designated to have substantial global, entrepreneurial and/or experiential components. Students can establish a concentration by taking all of the electives in a single area. However, students desiring a concentration in accounting are required to take four accounting electives. Thus, the number of credits required for graduation for the M.B.A. with a concentration in accounting is 60 credits. The Graduate Studies in Business Office maintains current lists of approved electives for each concentration and for the general program.

### Fast Track Executive Master of Business Administration (M.B.A.)

#### Admission requirements summary

##### Fast Track Executive Master of Business Administration (M.B.A.)

Indicate specialization: Fast Track Executive M.B.A.

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Fast Track M.B.A.	Fall only	Mar 15 (for early decision)	GMAT
		May 15 (final deadline)	

The Fast Track Executive Master of Business Administration program provides an opportunity for rising executives and professionals with six or more years of management-level work experience to obtain a master's degree in business administration. Participants gain a wide range of new skills and knowledge by combining course work with day-to-day business activities.

The program is targeted to rising business executives, entrepreneurs,

nonprofit managers and service professionals. It differs from other Master's programs at VCU as a result of its unique modular curriculum, which integrates components of communication, technology, service/quality, globalism and strategy. The modules include 1) team building and leadership, 2) business foundations, 3) analysis and decisions, 4) global challenges, 5) organizational culture, 6) productivity and innovation, and 7) strategic management.

The Fast Track Executive M.B.A. Program is a lockstep program that meets alternating weekends, Fridays, 12:30 to 6:15 p.m. and Saturdays, 8 a.m. to 2:15 p.m. The program can be completed in approximately 20 months. For more information, contact the Fast Track Executive M.B.A. Office at (804) 828-3622 or fax (804) 828-6717.

## Program requirements

The program is designed for students with familiarity with significant work experience. The student's adviser will review the student's educational and professional background to determine the extent to which the student has satisfied the prerequisites. Those with outstanding prerequisites will be required to attend one or more training sessions to remove any deficiencies.

The program consists of 13 courses that are divided into seven integrated modules.

Degree requirements	credits
Module 1	
FMBA 601 Team Building and Leadership (course 1)	3
FMBA 602 Team Building and Leadership (course 2)	3
Module 2	
FMBA 603 Business Foundations (course 1)	3
Module 3	
FMBA 604 Analysis and Decisions (course 1)	3
FMBA 605 Analysis and Decisions (course 2)	3
FMBA 606 Analysis and Decisions (course 3)	3
Module 4	
FMBA 607 Global Challenges (course 1)	3
Module 5	
FMBA 608 Organizational Culture (course 1)	3
Module 6	
FMBA 609 Productivity and Innovation (course 1)	3
FMBA 610 Productivity and Innovation (course 2)	3
Module 7	
FMBA 611 Strategic Management (course 1)	3
FMBA 612 Strategic Management (course 2)	3
FMBA 613 Strategic Management (course 3)	3
	<hr/> 39

## Combined Doctor of Pharmacy (Pharm.D.) and Master of Business Administration (M.B.A.)

The Pharm.D./M.B.A. program seeks to prepare pharmacists for careers that encompass pharmacy and business theories and principles. The program is designed to take advantage of efficiencies and electives in both the Pharm.D. and M.B.A. programs. Students in the combined program can earn both degrees and save as much as one year or more over the time required for enrolling in the programs separately.

Students may be admitted in the program during their first year of enrollment in the Pharm.D. program. Applicants must be an enrolled student in the Pharm.D. program, have demonstrated a good academic record and have successfully completed the Graduate Management Admission Test (GMAT).

To get both degrees, students will take all pharmacy courses unless

waived, the seven business foundation courses, the nine M.B.A. core courses and three elective courses. The elective M.B.A. courses may be taken from pharmacy administration courses at the 600 level, and a combination of a business seminar course and an elective advanced pharmacy practice experience in pharmacy management. The business foundation courses can be taken during the first two years in the pharmacy program with summer session(s). The M.B.A. core courses can be taken during the third and fourth years in the pharmacy program. The business electives can be taken during the fourth and fifth years in the combined program.

Students interested in pursuing the Pharm.D./Master of Business Administration dual degree program must first obtain admission to the Pharm.D. program. Admitted Pharm.D. students who desire to add the M.B.A. degree to their program then must apply to the M.B.A. program. Upon admission to the M.B.A. program, a Pharm.D. student will be considered a dual-degree seeking student. Students generally will register for a mix of School of Business courses and School of Pharmacy courses in their fourth, fifth and sixth semesters of the pharmacy program.

Students categorized as a Pharm.D. student will be charged tuition and fees from the School of Pharmacy and will be eligible to receive financial aid awards as Pharm.D. students. Student categorized as M.B.A. students will be charged tuition and fee rates as a graduate student and be eligible to receive financial awards as a graduate student.

## Admission requirements

Students interested in pursuing the Pharm.D./M.B.A. dual degree program must first obtain admission to the Pharm.D. program. Admitted Pharm.D. students who desire to add the M.B.A. degree to their program must apply to the M.B.A. program using the Application for Graduate Study found at the Graduate School Web site: <http://www.vcu.edu/graduate>.

A complete application to the M.B.A. program includes:

- Application for Graduate Study and application fee.
- Request for In-state Tuition Rates (as applicable).
- Three letters of reference, including a letter of support from the School of Pharmacy.
- Official transcripts from all universities previously attended, including current VCU transcript.
- Current GMAT test score.
- Interview with director of graduate programs in School of Business.

## Tuition and financial aid considerations

Upon admission to the M.B.A. program, a Pharm.D. student will be considered a dual degree-seeking student. Students will most often register for a mix of School of Business courses and School of Pharmacy courses each semester of the program. The School of Pharmacy and School of Business have agreed that dual degree-seeking students will be considered Pharm.D. students in years P1, P2, P3 and P5. Students will be considered M.B.A. (graduate) students in year P4. When categorized as Pharm.D., a student will be charged tuition and fees from the School of Pharmacy and will be eligible to receive financial aid awards as a Pharm.D. student. When categorized M.B.A. (graduate) a student will be charged the graduate tuition and fee rate of the Monroe Park Campus and will be eligible to receive financial aid awards as a graduate student.

## Curriculum requirements

To earn both degrees, students will complete the following requirements. For the Pharm.D. program, all required Pharm.D. prerequisite and required courses must be taken unless waived by the appropriate representative of the School of Pharmacy. For the M.B.A. program requirements, the foundation courses listed below must be taken. Courses may be waived for students who have taken the equivalent material at the undergraduate level.

ACCT 507 Fundamentals of Accounting  
 ECON 500 Concepts in Economics  
 FIRE 520 Financial Concepts of Management  
 MGMT 524 Statistical Elements of Quantitative Management  
 MGMT 540 Management Theory and Practice  
 MRBL 530 Fundamentals of the Legal Environment of Business  
 MRBL 570 Concepts and Issues in Marketing

The following nine courses of the M.B.A. Advanced Program will be required for each student:

**Semester one:** (to be taken at same time)

INFO 661 Information Systems for Managers  
 MGMT 641 Organization Leadership and Project Team Management

**Semester two:** (to be taken at same time)

MGMT 675 Operations Management	3
One of the following courses:	3
ECON 610 Managerial Economics	
INFO 644 Emerging Information Technologies	
MRBL 671 Marketing Management	

**Remainder of the Advanced Program (including courses not taken in semester two)**

ACCT 608 Managerial Accounting	3
ECON 610 Managerial Economics	3
FIRE 621 Cases in Financial Management	3
INFO 664 Emerging Information Technologies	3
MGMT 642 Business Policy (to be taken after completion of 15 credits of advanced program)	
MRBL 671 Marketing Management	
Electives	

Three M.B.A. elective courses may be taken in the School of Business or by completing approved Pharm.D. electives and/or an applied pharmacy practice experience in pharmacy management, as individually approved by the director of graduate programs in the School of Business.

The key to successful completion of the Pharm.D./M.B.A. dual degree program will be timely and continuing advising from both the appropriate School of Pharmacy adviser and the director of graduate programs in the School of Business. For this reason, students are encouraged to seek admission to the dual degree program as early in their Pharm.D. program as possible.

### **Combined Fast Track Master of Business Administration (M.B.A.) and Master of Science in Information Systems (M.S.) – Information Technology Management**

Students in the Fast Track M.B.A. program have the option to continue with the Fast Track Executive M.S. in Information Systems – Information Technology Management program after having completed the requirements for the Fast Track M.B.A. to earn both degrees. Students pursuing this dual degree option will have four courses in the Fast Track M.S. program waived (these four courses cover the information systems content of the Fast Track M.B.A. program).

### **Combined Master of Business Administration (M.B.A.) and Master of Science in Information Systems (M.S.)**

Students can earn both M.B.A. and M.S. in Information Systems degrees by having 12 credits counted toward both degrees, thus requiring only 54 credits total of advanced course work (not counting foundation courses), rather than the 36 and 30 credits normally required for the two degrees. Students in the combined degree program will follow the same schedule as regular M.B.A. students, including the two lockstep semesters. To get both degrees, students will take all foundation courses required for the M.B.A., unless waived, all nine core courses required for the M.B.A., and nine additional courses in the M.S. in Information Systems program, including INFO 610, INFO 620 and INFO 630. Students whose undergraduate degree is not in Information Systems may also be required to take additional undergraduate prerequisite courses before taking the graduate information systems courses, as determined by the program adviser. The INFO 661 course taken for the M.B.A. will substitute for INFO 640, normally required for the M.S. in Information Systems degree, and three of the additional information systems courses also will count toward the normally required three elective courses in the M.B.A. program.

One of the information systems courses must have substantial global, entrepreneurial and/or experiential components. The six information systems courses to be taken in addition to INFO 661, INFO 664, INFO 610, INFO 620 and INFO 630 must be approved by the program adviser, and would normally be selected to satisfy one of the M.S. in Information Systems tracks.

### **Business, Doctor of Philosophy (Ph.D.)**

#### **Admission requirements summary**

**Business, Doctor of Philosophy (Ph.D.)**

Select one major specialization: accounting, information systems or management and one minor track: decision sciences, economics, finance, human resource management and industrial relations, international business, marketing, or other related areas of study approved by the School of Business

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall	Jan 1	GMAT

**Special requirements:**

Accounting majors admitted fall 2003 and alternating years thereafter

The Ph.D. in Business program is designed specifically for individuals intending to fill positions at institutions that require a balance of scholarly training, teaching and practical application of the appropriate field of study. With its small size — the program has less than 40 students — it allows for extensive one-to-one interaction between students and faculty. Three areas of study are offered: accounting, information systems and management.

A basic tenet of the Ph.D. in Business program is that the classic trilogy of research, teaching and service typically invoked in university mission statements is synergistic. The program strives to develop graduates who share this perspective and aspire to well-rounded individual roles within universities, colleges and other learning organizations. For this reason, the program provides instruction in both research and teaching.

Instruction in basic and applied research is the cornerstone of the program. To fulfill the requirements for the degree, students must demonstrate successful completion of prerequisite and advanced courses, of comprehensive examinations in major and minor areas of study, and completion and defense of a dissertation. The advanced courses provide

coverage in basic theories, methodologies and techniques needed to conduct research. The dissertation demonstrates the student's competence in conducting independent research.

Enhancement of teaching skills is emphasized in the program. It provides students with mentoring and teaching experience. Formal instruction designed to augment student teaching skills is also required. Mentoring involves teaming a student with a faculty member with the goal of augmenting student self-awareness and self-confidence in the classroom. Classroom experience is required to insure that the Ph.D. graduate enters the job market with certifiable teaching experience. The formal courses are designed to provide substantive instruction on teaching the adult learner.

A third aspect of the Ph.D. program is its emphasis on practical application in the area of study for students concentrating in accounting and information systems. In accounting, for example, emphasis is placed on projects based on real-world experience, and students are encouraged to develop papers around topics that address practical application of accounting concepts. In information systems, students usually work on projects brought in to the Information Systems Research Institute (ISRI). These projects focus on user applications and emphasize solutions to specific requirements.

## Admission requirements

Admission will be restricted to those who are considered by the School of Business Ph.D. Committee to possess academic and professional qualifications necessary to succeed in the program and to make a contribution to the profession. Criteria considered will include, among other things, performance at the bachelor's and graduate levels, GMAT scores, letters of recommendation, as well as both academic and business experience. Department admission committees may accept GRE scores as they deem appropriate. Preference will be given to students who have fulfilled the general business prerequisites of the program. An interview is highly recommended. Applicants should contact the Graduate Studies in Business Office or the Ph.D. area coordinator for the applicant's intended major to schedule an interview. Admission to the doctoral program is highly competitive; consequently, qualified applicants may be denied admission because of insufficient space and resources. Applications should be completed by Jan. 1 for fall admission.

### Prerequisite

Students are expected to be adequately prepared to begin doctoral study in their proposed major. Normally an M.B.A. degree earned from an AACSB-accredited institution is considered an indication of sufficient preparation. However, for the information systems major, the M.S. in Information Systems is considered sufficient preparation for doctoral study. Students deficient in preparation may be required to take necessary courses specified by the appropriate Ph.D. area coordinator or relevant designee.

## Degree requirements

Each student must select a major in one of the following specialties:

- Accounting
- Information systems
- Management

Additionally, students must select one different minor from the specialties listed above or the following:

- Decision sciences

- Economics
- Finance
- Human resource management
- International business
- Marketing
- An approved field outside the School of Business in a school or a department that offers a doctoral program. This option must have the approval of the Ph.D. committee and the director of graduate programs.

The following courses beyond those required at the master's level will be required for the Ph.D. degree.

All majors	credits
GRAD 602 Seminar in College Teaching	1
Research tools determined by each area	12
Six or seven courses in the major area	18-21
Three or four courses (9 to 12 semester credits) in the minor area as determined by the school/department offering the minor. Minors in the School of Business normally require four courses.	9-12
Dissertation research (minimum of 12 credits)	12
	<hr/> 52-58

In addition to the general academic regulations stated in the [Graduate Studies at VCU](#) section of this bulletin and the regulations listed earlier in this section for all students in graduate programs administered by the School of Business, Ph.D. students in the school are subject to the following requirements:

1. Students who fall below a 3.0 GPA will have one semester to make up that deficiency.
2. Students must register each semester (summer sessions excluded) for continuation in the program. Students who fail to register each semester will be dropped automatically from the program and must reapply for reinstatement.
3. The maximum time to complete all the requirements for the degree is seven calendar years from the date of entry into the program. The maximum time to complete the course work, pass the comprehensive examination and present an acceptable dissertation proposal is five years from the date of entry.
4. Doctoral study involves a devotion to independent study outside the classroom and interaction with the faculty and other students. During the period of advanced course work, students must complete at least nine credits each semester for a minimum of two consecutive semesters, one of which may be a summer session.
5. A maximum of six semester credits may be transferred from another AACSB-accredited university and applied toward the Ph.D. course requirements. All transfer work must be at the "A" or "B" grade level. Transfer credit shall not be older than seven years at the time the Ph.D. degree is awarded. Transfer credit is given at the discretion of the director of graduate programs in business after consultation with appropriate departmental or faculty representatives.

## Advising and evaluation

Each student will be assigned an adviser. The student's original program



and any subsequent changes must be approved by the adviser and the director of graduate programs in business. A file will be maintained on all students in the Graduate Studies in Business Office where their progress will be monitored and coordinated. Each student is required to complete an approved program form and file it with the Graduate Studies in Business Office no later than the end of the first semester in which the student is admitted. Failure to do so may result in dismissal from the program.

## Ph.D. in Business Handbook

The School of Business publishes a handbook that provides a comprehensive overview of the policies and procedures involved in obtaining a Ph.D. in business at VCU. All procedures associated with the Ph.D. program are covered — from admission to graduation — with special emphasis placed on the dissertation process. Detailed information about financial support, comprehensive examinations, and dissertation proposals and defenses is included in the [handbook](#).

## Business, Master of Science (M.S.)

### Admission requirements summary

#### Business, Master of Science (M.S.)

Indicate specialization:

The Master of Science program provides in-depth knowledge of one business discipline and allows students to develop and build technical skills in their specific area of interest. It is frequently recommended for students with an undergraduate business degree. Concentrations are available in the following functional areas:

- Decision sciences
- Finance
- Global marketing management
- Real estate valuation

### Admission requirements

Admission criteria include undergraduate performance, GMAT scores, intellectual capacity, experience, and other indicators of the ability to pursue graduate study profitably. Deadlines are as follows:

Spring	Nov 1
Summer	Mar 1
Fall	Apr 1/early decision
	Jun 1/final deadline

### Program requirements

A course in college algebra is a prerequisite for some concentrations; a course in calculus is required for others. Some concentrations (e.g., real estate valuation) have additional undergraduate prerequisites as well. Some or all of these prerequisite courses may be waived for students who present satisfactory, equivalent preparation or may be taken after admission.

Each student in the program must complete a minimum of four 500-level foundation courses (12 credit hours) required for the M.B.A. degree. Foundation courses may be waived for students who present satisfactory, equivalent preparation at either the undergraduate or graduate level. Students who are required to take foundation courses may do so at the

graduate level after admission. The foundation courses required will vary depending upon the student's background, career interests and the chosen area of specialization. Applicants should consult with the area coordinators or department chairs or the director of graduate programs in business to determine the foundation courses required for a particular area. Each student in the program also must complete a minimum of 10 600-level advanced courses (30 credit hours), although up to two additional courses (six credit hours) may be required for some concentrations. A student, in consultation with a faculty adviser, selects a set of advanced courses to create a tailored and focused program of study. Applicants should consult with the area coordinators, department chairs, or the director of graduate programs in business to determine the departmental guidelines controlling the required courses and electives for a particular concentration.

For additional information, refer to the Web: <http://www.gsib.vcu.edu>.

## Decision sciences

### Admission requirements summary

#### Decision sciences

Degree:	Semester(s)	Deadline	Test
	of entry:	dates:	requirements:
M.S.	Fall	Apr 1	GMAT
			(for early decision)
		Nov 1	
	Spring	Mar 1	
	Summer		

This concentration provides students with both a conceptual understanding of quantitative methods used successfully in many business environments and skills in applying them. In addition to statistics, operations research and production/operations management courses, a restricted number of approved quantitative courses can be selected from the departments of Economics, Biostatistics or Mathematical Sciences.

#### Foundation courses (0 to 15 credit hours)

MGMT 524 Statistical Elements of Quantitative Management  
And at least four of the courses listed below or provide proof of satisfactory equivalent preparation:

ACCT 507 Fundamentals of Accounting  
FIRE 520 Financial Concepts of Management  
MGMT 540 Management Theory and Practice  
MRBL 570 Concepts and Issues in Marketing  
ECON 500 Concepts in Economics

#### Core courses (30 credit hours)

MGMT 645 Operations Research  
MGMT 632 Statistical Analysis

And any three of the four courses below:

MGMT 648 Managerial Decision Making  
MGMT 669 Forecasting Methods  
MGMT 675 Operations Management  
MGMT 677 Quality

And any five courses selected from below that meet the approval of the faculty adviser:

A fourth course from the above list (MGMT 648, MGMT 669, MGMT 675 or MGMT 677)  
From the School of Business (other business courses may be selected that would fit with the student's interests and career objectives):  
ACCT 608 Managerial Accounting

ECON 610 Managerial Economics  
 ECON 612 Econometrics  
 ECON 614 Mathematical Economics  
 INFO 619 Computer Assisted Simulation  
 MGMT 642 Business Policy  
 MGMT 643 Applied Multivariate Methods  
 MGMT 697 Guided Study  
 MRBL 673 Marketing Research

From outside the School of Business:

BIOS 647 Survival Analysis  
 MATH 520 Game Theory and Linear Programming  
 MATH 523 Discrete Event Simulation  
 MATH 527-528 Mathematical Foundations of Operations Research  
 STAT 503 Introductions to Stochastic Processes  
 STAT 513-514 Mathematical Statistics  
 STAT 523 Nonparametric Statistical Methods  
 STAT 549 Statistical Quality Control  
 STAT 623 Discrete Multivariate Analysis

Note: Most of the courses above have prerequisites. It is always wise to check with the instructor before registering to ensure that the student's preparation is sufficient for taking the course.

## Finance

### Admission requirements summary

#### Finance

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.	Fall	Apr 1 (for early decision) Jun 1 (final decision)	GMAT
	Spring	Nov 1	
	Summer	Mar 1	

The finance concentration is designed to prepare students for financial decision-making positions in corporate, investment, financial and governmental institutions. Courses offered in finance include advanced financial management, investments and security analysis, funds management in financial institutions, international finance, and derivatives.

#### Prerequisite

Calculus (MGMT 212 or MGMT 500)

**Foundation courses** (0 to 12 credit hours, dependent on the number of courses waived or included as free electives.)

ACCT 507 Fundamentals of Accounting  
 ECON 500 Concepts in Economics

FIRE 520 Financial Concepts of Management  
 MGMT 524 Statistical Elements of Quantitative Management

#### Core area (15 credit hours)

FIRE 622 Financial Management of Financial Institutions  
 FIRE 623 Financial Management  
 FIRE 635 Investments and Security Analysis  
 FIRE 639 International Finance  
 FIRE 650 Derivatives

#### Finance, insurance and real estate electives (12 credit hours)

Students select four of the following courses:

FIRE 621 Cases in Financial Management  
 FIRE 625 Group Insurance and Pension Planning  
 FIRE 626 Risk Management  
 FIRE 628 Using GIS in Real Estate Decisions  
 FIRE 629 Real Estate Investment Analysis  
 FIRE 654 Short-term Financial Management  
 FIRE 657 Current Issues in Investments and Markets  
 FIRE 658 Real Estate Finance and Investments  
 FIRE 664 Current Issues in Corporate Finance  
 FIRE 691 Topics in Finance, Insurance and Real Estate  
 FIRE 693 Field Project in Finance, Insurance and Real Estate\*  
 FIRE 697 Guided Study in Finance, Insurance and Real Estate

\* FIRE 693 Field Project in Finance, Insurance and Real Estate is recommended for full-time students. The department will work closely with full-time students and prospective employers in order to achieve this goal.

A student may substitute a free elective for one of the FIRE electives with the approval of the director of the concentration in finance.

#### Free electives (9 credit hours)

Students may choose any three free electives approved by the director of the M.S. program in finance. Students are encouraged to select accounting, economics, math or statistics courses. Up to two foundation courses may be included as free electives, if they were not waived, as may additional courses included in the list of finance, insurance and real estate electives.

## Global marketing management

### Admission requirements summary

#### Global marketing management

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.	Fall	Apr 1 (for early decision) Jun 1 (final deadline)	GMAT
	Spring	Nov 1	
	Summer	Mar 1	

The Master of Science in Business with a global marketing management concentration offers students the opportunity to concentrate their studies in two related areas: marketing management and global business management. Students select foundation, core and/or elective courses in accounting, economics, finance or management to complement marketing courses in the program. Students interested in preparing for the increasingly global nature of business will be well suited for this unique Master of Science degree program. All degree candidates are strongly encouraged to participate in an intensive study program in a foreign language and/or a foreign study program.

**Foundation courses** (0 to 21 credit hours; these courses may be waived for students who have taken equivalent material at the undergraduate level.)

ACCT 507 Fundamentals of Accounting  
ECON 500 Concepts in Economics  
FIRE 520 Financial Concepts of Management  
MGMT 524 Statistical Elements of Quantitative Management  
MRBL 570 Concepts and Issues in Marketing  
Two-course sequence in a foreign language at the undergraduate or graduate level (or demonstrated proficiency)  
**or**  
Two approved cross-cultural courses taken at the undergraduate or graduate level

**Core courses** (30 credit hours)

Required marketing and strategy courses (15 credits)

MRBL 671 Marketing Management (prerequisite MRBL 570)  
MRBL 656 International Marketing (prerequisite MRBL 570)  
MRBL 657 International Marketing Planning Project (prerequisite MRBL 570 and 673)  
MRBL 673 Marketing Research (prerequisite MRBL 570 and MGMT 524)  
MGMT 642 Business Policy (to be taken in the last semester)

Required global business courses (choose two; 6 credits)

ACCT 606 International Accounting (prerequisite ACCT 507)  
ECON 609 Advanced International Economics (prerequisite ECON 500)  
FIRE 639 International Finance (prerequisite FIRE 520)  
MGMT 644 International Business Management

**Electives** (six credit hours)

Choose three of the following courses:

MRBL 672 Concepts in Consumer Behavior  
MRBL 674 Service Quality Management  
MRBL 676 Marketing Strategy  
MRBL 697 Guided Study in Business  
Any courses from study abroad (up to 6 credits)

## Admission requirements summary

### Human resources management and industrial relations

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.	Fall Spring Summer	Admissions currently suspended	GMAT

**Note: Admission to the Master of Science in Business with a concentration in human resource management and industrial relations has been suspended.**

The Master of Science in Business with a human resource management and industrial relations concentration is designed to provide students with an in-depth understanding of the field and its problems and opportunities. The curriculum focuses on the dynamics of an ever-changing field from a local, national and international perspective. The ultimate objective of the program is to prepare students for a career in human resource management and industrial relations.

### Foundation courses

(0 to 12 credit hours, depending upon how many courses are waived)

ECON 500 Concepts in Economics  
MGMT 524 Statistical Elements of Quantitative Management  
MGMT 540 Management Theory and Practice  
MRBL 530 Fundamentals of the Legal Environment of Business

### Core area (30 credit hours)

ECON 631 Labor Market Theory and Analysis  
FIRE 625 Group Insurance and Pension Planning  
MGMT 633 Issues in Labor Relations  
MGMT 637 Advanced Human Resource Management  
MGMT 649 Compensations Policy and Administration  
MGMT 680 Health, Safety and Security Administration  
MGMT 682 Human Resource Staffing  
MGMT 684 Issues in International Human Resource Management  
MGMT 690 Research Seminar in Management  
MRBL 646 Advanced Labor and Employment Relations Law

## Real estate valuation

## Admission requirements summary

### Real estate valuation

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.	Fall	Apr 1 (for early decision) Jun 1 (final deadline)	GMAT
	Spring	Nov 1	
	Summer	Mar 1	

The real estate valuation concentration is one of only five programs in the nation that satisfies the rigorous educational requirements of the Appraisal Institute's MAI designation. Students can satisfy most of the Appraisal Institute's education requirements by completing the concentration. This concentration emphasizes real estate valuation while providing comprehensive education in related disciplines so that graduates' analytical skills and abilities to communicate with other professionals are greatly enhanced. Whenever possible, students will be placed in

## Human resources management and industrial relations

internships with MAIs.

#### Prerequisite courses

FIRE 425 Real Estate Appraisal

FIRE 431 Advanced Real Estate Appraisal

A course in calculus (MGMT 212 or MGMT 500)

**Foundation courses** (0 to 18 hours, dependent on the number of courses waived)

ACCT 507 Fundamentals of Accounting

ECON 500 Concepts in Economics

FIRE 520 Financial Concepts of Management

MGMT 524 Statistical Elements of Quantitative Management

MRBL 530 Fundamentals of the Legal Environment of Business

MRBL 570 Concepts and Issues in Marketing

**Required courses** (30 credit hours)

ECON 617 Financial Markets

FIRE 621 Cases in Financial Management

FIRE 627 Real Estate Development

FIRE 628 Using GIS in Real Estate Decisions

FIRE 629 Real Estate Investment Analysis

FIRE 638 Real Property Investment Law

FIRE 658 Real Estate Finance and Investments

FIRE 697 Guided Study – Real Estate

FIRE 697 is a supervised research course that involves the preparation of a narrative income-property appraisal report or research project.

MGMT 632 Statistical Analysis

MRBL 673 Marketing Research

## Economics, Master of Arts (M.A.)

### Admission requirements summary

#### Economics, Master of Arts (M.A.)

Indicate specialization:

The Master of Arts in Economics is designed to enhance the students' abilities to use economic modeling to conduct applied analytical and econometric research. Students in this program are expected to demonstrate competence over a rigorous and current core curriculum in microeconomic and macroeconomic theory and in econometrics.

Graduates of the program should be well qualified to conduct applied economic analysis in either a government or corporate research setting. The program also is an excellent preparation for entry into a doctoral program in economics or finance.

Students may elect a Master of Arts in Economics without specialization or may specialize in financial economics. The specialization in financial economics combines the theoretical and econometric foundation obtained in the core courses of the concentration in quantitative economics with an in-depth study of their application to financial markets.

The Master of Arts in Economics without specialization requires 30 semester hours of work, while the specialization in financial economics requires 33 semester hours. Both a thesis and a nonthesis option are available.

### Admission criteria

Admission criteria include undergraduate performance, the Graduate Record Examination (GRE), intellectual capacity, experience and other indicators of the ability to pursue graduate study profitably. The GRE

subject test in economics is not required. Applicants to the financial economics track may substitute the GMAT for the GRE. Applications should be completed at least eight weeks prior to the beginning of the semester or summer session desired.

## Financial economics specialization

### Admission requirements summary

#### Financial economics specialization

Degree: Semester(s) Deadline Test

of entry: dates: requirements:

M.A.	Fall	Jul 15	GRE-General (GMAT is acceptable)
	Spring	Nov 15	
	Summer	Mar 15	

#### Degree requirements

One course in each of the following subject areas is a prerequisite for the specialization in financial economics: intermediate macroeconomic theory, intermediate microeconomic theory, introductory econometrics, calculus and finance. The student's adviser will review the student's economics and mathematical background to determine the extent to which the student has satisfied the prerequisites. Required prerequisites may be taken after admission.

The specialization in financial economics requires 33 semester hours of 600-level courses. Under the thesis option, the 33 hours must include nine core courses and two restricted electives. Under the non-thesis option, the 33 hours must include seven core courses, three restricted electives and one general elective in economics, finance or other approved field.

### Degree requirements with thesis

Core area	credits
ECON 604 Advanced Microeconomic Theory	3
ECON 607 Advanced Macroeconomic Theory	3
ECON 612 Econometrics	3
ECON 614 Mathematical Economics	3
ECON 641 Econometric Time Series Analysis	3
ECON 642 Panel and Nonlinear Methods in Econometrics	3
ECON 798-799 Thesis in Economics	6
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#### Restricted electives

Two of the following three courses	6
ECON 623 Anomalies in Financial Economics	
FIRE 635 Investments and Security Analysis	
FIRE 650 Derivatives	
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### Degree requirements without thesis

Core area	credits
ECON 604 Advanced Microeconomic Theory	3
ECON 607 Advanced Macroeconomic Theory	3
ECON 612 Econometrics	3

ECON 614 Mathematical Economics	3
ECON 617 Financial Markets	3
ECON 641 Econometric Time Series Analysis	3
ECON 642 Panel and Nonlinear Methods in Econometrics	3
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	21

**Restricted electives**

Three of the following four courses	9
ECON 623 Anomalies in Financial Economics	
FIRE 623 Financial Management	
FIRE 635 Investments and Security Analysis	
FIRE 650 Derivatives	
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Approved elective in economics, finance or other field	3
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	33

Note: Electives are approved in consultation with the graduate adviser for the Master of Arts in Economics.

**Without specialization****Admission requirements summary****Without specialization**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.A.	Fall	Jul 15	GRE-General
	Spring	Nov 15	
	Summer	Mar 15	

**Curriculum**

One course in each of the following subject areas is a prerequisite for the Master of Arts in Economics: intermediate macroeconomic theory, intermediate microeconomic theory, introductory econometrics and calculus. The student's adviser will review the student's economics and mathematical background to determine the extent to which the student has satisfied prerequisites. Required prerequisites may be taken after admission. The degree requires 30 semester hours of 600-level credit. Under the thesis option, the 30 hours must include eight core courses and one economics elective, and one business or economics elective. Under the nonthesis option, the 30 hours must include six core courses, two economics electives, and two business or economics electives.

**Degree requirements with thesis**

Core area	credits
ECON 604 Advanced Microeconomic Theory	3
ECON 607 Advanced Macroeconomic Theory	3
ECON 612 Econometrics	3
ECON 614 Mathematical Economics	3
ECON 641 Econometric Time Series Analysis	3
ECON 642 Panel and Nonlinear Methods in Econometrics	3
ECON 798-799 Thesis in Economics	6
	<hr/>
	24
Approved economics elective	3
Approved elective in economics, business or other field	3
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	30

**Degree requirements without thesis**

Core area	credits
ECON 604 Advanced Microeconomic Theory	3
ECON 607 Advanced Macroeconomic Theory	3
ECON 612 Econometrics	3
ECON 614 Mathematical Economics	3
ECON 641 Econometric Time Series Analysis	3
ECON 642 Panel and Nonlinear Methods in Econometrics	3
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	18

Approved economics electives	6
Approved electives in economics, business or other field	6
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	30

**Information Systems, Master of Science (M.S.)****Admission requirements summary****Information Systems, Master of Science (M.S.)**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.	Fall	Apr 1 (for early decision) Jun 1 (final deadline)	GMAT
	Spring	Nov 1	
	Spring	Mar 1	
	Summer		

The Master of Science in Information Systems program is designed to prepare students for specialized roles in information systems. The program is intended to provide a graduate-level, technically oriented curriculum that focuses on the design and development of information systems to solve real-world problems. The department's curriculum is focused on the rapidly emerging area known as Enterprise Information Systems. Graduates of the program are expected to be able to take significant roles in planning, organizing, managing, designing, configuring and implementing EIS systems using state-of-the-art technologies within organizations.

Students applying to the master's program must show evidence of competence in selected prerequisite areas of information systems including: application programming, systems analysis and design, database, telecommunications, and hardware/software. Evidence of this competence may include formal course work, comparable training within a work environment, or significant, relevant and recent work experience in the field. Students enrolled as majors in the program who do not have formal background or equivalent training must take the appropriate undergraduate courses to satisfy the prerequisites prior to taking master's program courses. The required undergraduate courses are: INFO 300, INFO 350, INFO 360, INFO 361, INFO 370, INFO 464 and a course in calculus.

Students who do not have a business degree must complete a minimum of four 500-level foundation courses (12 credit hours). Foundation courses may be waived for students who present satisfactory, equivalent preparation at either the undergraduate or graduate level. Students who are required to take foundation courses may do so after admission. The foundation courses required will vary depending upon the student's background, career interests and the chosen area of specialization. Students applying to the Master of Science in Information Systems program should consult with their master's program adviser to determine

the foundation courses required for a particular area.

The program consists of 30 graduate credit hours including: four core courses (12 credit hours), two courses in each of two concentration areas (12 credit hours) and two elective courses (6 credit hours). Core graduate course are:

INFO 610 Analysis and Design of Database Systems  
INFO 620 Data Communications  
INFO 630 Systems Development  
INFO 640 Information Systems Management

In addition to the core courses, students must select two concentration areas from those listed below, plus two elective courses. The two elective courses may be taken from one or more of the other concentration areas or from other approved courses in information systems, in consultation with the student's adviser and based upon the student's area of interest, career goals, and existing departmental and university areas of expertise.

#### **Business engineering concentration**

INFO 611 Data Engineering  
INFO 632 Business Process Engineering

#### **Knowledge engineering concentration**

INFO 614 Data Mining  
INFO 616 Data Warehousing

#### **Information technology management concentration**

INFO 643 Information Technology Project Management  
INFO 641 Strategic Information Systems Planning

#### **Information assurance concentration**

INFO 644 Information Systems Security  
INFO 622 Network Security and Administration

### **Fast Track Executive Master of Science in Information Systems (M.S.) – Information Technology Management**

The Fast Track Executive Master of Science in Information Systems with a concentration in information technology management provides an opportunity for current information technology professionals and business managers to receive the necessary preparation to move into IT management roles. Participants gain a wide range of new skills and knowledge by combining course work with their day-to-day professional activities. The program is targeted to rising business executives, entrepreneurs and information systems professionals. The program differs from the regular M.S. in Information Systems program in that it is offered in a weekend format, with students meeting for classes on alternate weekends throughout the calendar year. The lock-step program consists of 10 required courses.

	credits
ISTM 671 Organizational Culture and Team Building	3
ISTM 672 Information Systems Management	3
ISTM 673 Analysis and Decisions	3
ISTM 674 Emerging Technologies	3
ISTM 675 IS Planning and Project Management	3
ISTM 676 Information Systems Assurance and Security Management	3
ISTM 677 Structuring Information for Decision Making	3
ISTM 678 IS in the Digital Economy	3
ISTM 679 Enterprise Information Systems	3
ISTM 691 Topics in IT Management	3

The program is designed for students familiar with business foundations as well as with technical areas of information systems, including

programming, systems analysis and design, database, and data communications. The student's adviser will review the student's educational and professional background to determine the extent to which the student has satisfied the prerequisites. Students lacking in prerequisite knowledge will be required to participate in special training sessions provided by the School of Business.

### **Information Technology Management concentration**

Master of Science in Information Systems with a concentration in information technology management provides an opportunity for current information technology professionals and business managers to receive the necessary preparation to move into IT management roles.

#### **Prerequisites**

Applicants should have undergraduate courses or substantial professional experience in the following subject areas:

- accounting
- business law
- computer hardware/software
- database
- data communications
- e-commerce
- economics
- finance
- management
- marketing
- organizational behavior
- programming
- systems analysis and design

#### **Curriculum**

	credits
ISTM 671 Organizational Culture and Team Building	3
ISTM 672 Information Systems Management	3
ISTM 673 Analysis and Decisions	3
ISTM 674 Emerging Technologies	3
ISTM 675 IS Planning and Project Management	3
ISTM 676 Information Systems Assurance and Security Management	3
ISTM 677 Structuring Information for Decision Making	3
ISTM 678 IS in the Digital Economy	3
ISTM 679 Enterprise Information Systems	3
ISTM 691 Topics in IT Management	3

### **Combined Fast Track Master of Business Administration (M.B.A.) and Master of Science in Information Systems (M.S.) – Information Technology Management**

Students in the Fast Track M.B.A. program have the option to continue with the Fast Track Executive M.S. in Information Systems – Information Technology Management program after having completed the requirements for the Fast Track M.B.A. to earn both degrees. Students pursuing this dual degree option will have four courses in the Fast Track M.S. program waived (these four courses cover the information systems content of the Fast Track M.B.A. program).

### Combined Master of Business Administration (M.B.A.) and Master of Science in Information Systems (M.S.)

Students can earn both M.B.A. and M.S. in Information Systems degrees by having 12 credits counted toward both degrees, thus requiring only 54 credits total of advanced course work (not counting foundation courses), rather than the 36 and 30 credits normally required for the two degrees. Students in the combined degree program will follow the same schedule as regular M.B.A. students, including the two lockstep semesters. To get both degrees, students will take all foundation courses required for the M.B.A., unless waived, all nine core courses required for the M.B.A., and nine additional courses in the M.S. in Information Systems program, including INFO 610, INFO 620 and INFO 630. Students whose undergraduate degree is not in Information Systems may also be required to take additional undergraduate prerequisite courses before taking the graduate information systems courses, as determined by the program adviser. The INFO 661 course taken for the M.B.A. will substitute for INFO 640, normally required for the M.S. in Information Systems degree, and three of the additional information systems courses also will count toward the normally required three elective courses in the M.B.A. program.

One of the information systems courses must have substantial global, entrepreneurial and/or experiential components. The six information systems courses to be taken in addition to INFO 661, INFO 664, INFO 610, INFO 620 and INFO 630 must be approved by the program adviser, and would normally be selected to satisfy one of the M.S. in Information Systems tracks.

### Real Estate and Urban Land Development, Certificate in (Post-baccalaureate graduate certificate)

#### Admission requirements summary

##### Real Estate and Urban Land Development, Certificate in (Post-baccalaureate graduate certificate)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Certificate	Fall	Jul 15	
	Spring	Nov 15	
	Summer	Mar 15	

##### Special requirements:

Minimum of five years experience is preferred.

The Graduate Certificate in Real Estate and Land Development is designed for professionals who seek an opportunity for advanced study in real estate and are more interested in the focused knowledge obtainable than receipt of a graduate degree. The certificate provides students the ability to advance their careers while receiving recognition for their academic accomplishment in the form of a graduate certificate. Many working professionals, especially those with undergraduate majors in liberal arts, will find this program attractive since they can concentrate their energies on a tightly focused curriculum without enrolling in a large number of prerequisite courses. The graduate certificate may be completed by

taking both on-campus and internet-based courses.

#### Admission criteria

Applicants must have an earned baccalaureate degree or its equivalent from an accredited college or university. Other admission requirements include (1) proficiency in using spreadsheet computer software demonstrated either by examination or completion of appropriate course work and (2) minimum of 2.7 GPA at the undergraduate level. A minimum of five years of business experience is preferred. Students are expected to have completed FIRE 431 Advanced Real Estate Appraisal or its equivalent prior to beginning graduate course work.

#### Certificate requirements

In order to be eligible for receiving the certificate, a student must maintain an overall GPA of 3.0. Eighteen credit hours beyond the bachelor's degree is required for completion of this graduate certificate program. A maximum of one three-hour course taken at another AACSB-accredited institution may be transferred into this program. Students interested in later applying for admission into either the Master of Business Administration program with concentration in real estate and urban land development or the Master of Science in Business with concentration in real estate valuation must do so through a separate application process. Admission is dependent on the applicant having achieved a 3.0 GPA in the graduate certificate and a satisfactory score on the GMAT examination.

Required courses	credits
FIRE 627 Real Estate Development	3
FIRE 628 Using GIS in Real Estate Decisions	3
FIRE 629 Real Estate Investment Analysis	3
FIRE 638 Real Property Investment Law	3
FIRE 658 Real Estate Finance and Investments	3
Plus one of the following courses:	3
FIRE 621 Cases in Financial Management	
MGMT 655 Entrepreneurship	
MRBL 674 Service Quality Management	
	18

### Taxation, Master of (M.Tax.)

#### Admission requirements summary

##### Taxation, Master of (M.Tax.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.Tax.	Fall	Jul 15	GMAT (may be waived for professional track)
	Spring	Nov 15	
	Summer	Mar 15	

##### Special requirements:

Professional track requires documentation of C.P.A. or J.D.

The Master of Taxation program is designed 1) to offer an opportunity for existing tax professionals to update and expand existing tax knowledge, and 2) to prepare students for entry level positions in the field of taxation. The program includes a comprehensive study of tax laws and regulations, administrative practice and procedure, and tax research fundamentals. It is designed to develop both technical knowledge and conceptual understanding within the field of taxation. Ethical considerations are stressed within the framework of individual courses.

#### Admission

Applicants may be admitted under either a professional or an academic



track. The professional track is designed for current tax professionals who want to enhance existing skills. Admission under the professional track requires a minimum undergraduate GPA of 3.0 (on a 4.0 scale); C.P.A., C.M.A. or J.D. designation; a minimum of two years relevant work experience, which should include independent tax research and supervisory experience; letters of recommendation; and a personal interview. The academic track is designed primarily for students seeking entry into the tax field. Admission under the academic track is based on traditional academic indicators designed to reflect an individual's ability to complete graduate study and include the undergraduate record, GMAT score, letters of recommendation and a personal interview (preferred). Once admitted to the program, all students must satisfy the same requirements for award of the Master of Taxation degree. Applications should be completed by:

Fall Jul 15  
Spring Nov 15  
Summer Mar 15

## Requirements

Three semester hours of tax accounting and a course in college algebra are prerequisites for the Master of Taxation. Prerequisites need not be completed prior to completing the application to the program.

The program consists of one prerequisite course, three foundation courses and 10 courses distributed over core courses, restricted electives and individual electives. The foundation courses may be waived for students who have taken the equivalent material at the undergraduate level or may be taken at the graduate level after the student has been admitted. A minimum of 30 hours of advanced graduate credit at the 600 level or higher will be required of all students.

### Degree requirements – Master of Taxation

	credits
<b>Prerequisite course</b>	
ACCT 405 Tax Accounting	3

### Foundation courses\*

ACCT 507 Fundamentals of Accounting	3
MRBL 530 Fundamentals of the Legal Environment of Business	
One course from the following list:	3
ECON 500 Concepts in Economics	
FIRE 520 Concepts of Financial Management	
MGMT 540 Management Theory and Practice	

### Advanced courses

Core area	
ACCT 680 Tax Research	3
ACCT 681 Tax Administration	3
ACCT 682 Corporate Taxation	3
ACCT 685 Taxation of Property Transactions	3
ACCT 688 Estate and Gift Taxation	3
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### Taxation electives

Three courses selected from the following list:	9
ACCT 609 State and Local Taxation	
ACCT 679 International Taxation	
ACCT 683 Taxation of Reorganizations	
ACCT 684 Partnership Taxation	

ACCT 686 Taxation of Pension/Deferred Compensation  
ACCT 687 Fiduciary Income Taxation  
ACCT 689 Estate Planning

### Approved electives

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The approved electives may include:

- Any 600-level taxation course not taken in the advanced courses or selected as a tax elective.
- Any 600-level accounting course except ACCT 608 and 678.
- Any approved 600-level advanced business or economics course.

\* These foundation courses may not be included in the 30 semester credits of advanced work required for the Master of Taxation.

## Department of Accounting

### Administration

**Edward N. Coffman**  
Professor and Chair

## Department of Economics

### Administration

**Edward L. Millner**  
Professor and Chair

## Department of Finance, Insurance and Real Estate

### Administration

**David E. Upton**  
Professor and Chair

## Department of Information Systems

### Administration

**Richard T. Redmond**  
Associate Professor and Chair

## Department of Management

### Administration

**Glenn H. Gilbreath**  
Professor and Chair

**Department of Marketing and Business  
Law**

**Administration**

**Frank J. Franzak**  
Associate Professor and Chair

# School of Dentistry

The School of Dentistry was created in 1893 when the University College of Medicine opened with a dental department as one of its original divisions. The Medical College of Virginia inaugurated a dental education program in 1897, and in 1913 the two schools were merged to form the MCV School of Dentistry.

In 1968, by an act of the Virginia General Assembly, MCV was merged with Richmond Professional Institute to form Virginia Commonwealth University. The School of Dentistry is located on VCU's MCV Campus.

The facilities of the School of Dentistry are housed in the Wood Memorial and Lyons buildings and contain clinical facilities, research facilities, classrooms, student laboratories, departmental offices and a computer-learning laboratory.

The school provides opportunities for selected, qualified individuals to study dentistry under the most favorable conditions and in accordance with the standards established by the Commission on Dental Accreditation of the American Dental Association.

The degree of doctor of dental surgery (D.D.S) is awarded to graduates of the school's professional program and the Bachelor of Science degree to graduates of the Division of Dental Hygiene.

Graduates of the advanced dental education programs in endodontics, orthodontics, pediatric dentistry and periodontics are awarded the Master of Science in Dentistry degree.

## Administration

520 N. 12th St.  
P.O. Box 980566  
Richmond, VA 23298-0566  
(804) 828-9184  
Fax (804) 828-6072  
[www.dentistry.vcu.edu](http://www.dentistry.vcu.edu)

**Ronald J. Hunt**  
Dean

**Betsy A. Hagan**  
Senior Associate Dean for Clinical Affairs

**Kimberley Blowe**  
Assistant Dean for Administrative Services

**Carolyn Booker**  
Assistant Dean for Students

**B. Ellen Byrne**  
Assistant Dean for Academic Affairs

**Laurie C. Carter**  
Director of Oral and Maxillofacial Radiology and Director of Advanced Dental Education Programs

**Michael Healy**  
Assistant Dean for Admissions

**Harvey A. Schenkein**  
Assistant Dean for Research

## Accreditation

Dental Hygiene (bachelor's degree)  
Commission on Dental Accreditation

Dentistry (D.D.S.)  
Commission on Dental Accreditation

Advanced Dental Education Programs including Endodontics, Oral and Maxillofacial Surgery, Orthodontics, Pediatric Dentistry, Periodontics, and Advanced Education General Dentistry  
Commission on Dental Accreditation

## Mission

The VCU School of Dentistry is a public, urban, research dental school, supported by Virginia to serve the people of the commonwealth and the nation. The school's mission is to provide educational programs that prepare graduates who are competent to provide dental care services, generate new knowledge through research and other scholarly activity, and provide quality oral health care to the public and service to the community.

## Philips Institute of Oral and Craniofacial Molecular Biology

### Andrew Yeudall

Interim Director, The Philips Institute, and Professor of Oral and Craniofacial Molecular Biology and Microbiology and Immunology

The mission of the Philips Institute of Oral and Craniofacial Molecular Biology is to serve the university and the commonwealth of Virginia as a center of educational and research excellence focused on infectious, neoplastic and genetic diseases of the oral cavity, head and neck.

## Dentistry, Doctor of Dental Surgery (D.D.S.)

The Doctor of Dental Surgery is a four-year program in general dentistry leading to the D.D.S. degree and emphasizing study in three broad areas: basic sciences, clinical sciences and social sciences. The academic year begins in July and extends through May.

## Admission requirements

A minimum of 90 semester hours (or equivalent) in an accredited college or university is required and must be documented. Most acceptances have a bachelor's degree and/or four years of college. Required courses are general biology, general chemistry, organic chemistry, physics and English. Laboratory experiences are required for those courses where applicable. Biology courses should emphasize zoology rather than botany. Courses in biochemistry, general microbiology or bacteriology, animal physiology, immunology, histology, genetics, embryology, the behavioral sciences, and courses involving psychomotor skills are strongly recommended. Academic credits presented by an applicant must be acceptable for credit toward a degree in the institution in which the courses are taken. Individuals interested in pursuing a career in dentistry should schedule an appointment in the Office of Admissions for individual guidance.

In order to successfully complete the dental curriculum at VCU, students must meet non-academic criteria for motor, sensory and observation, communication, cognitive and behavioral abilities in the document Technical Standards for Dental Education Programs for VCU School of Dentistry. Accordingly, applicants may be required to prove their proficiency in American English via standardized tests and interviews. An applicant may consider the option of postponing matriculation until such time that he/she can meet these requirements.

Participation in the Dental Admission Test (DAT) of the American Dental Association is required. It is recommended that this test be taken the year before the intended matriculation year. Applicants are encouraged to take the examination more than one time, and the best set of scores is used as the official set. Information about the Dental Admission Test can be

obtained from: a) your pre-health advising office of your undergraduate school, b) VCU, School of Dentistry Office of Admissions or c) the American Dental Association, Department of Testing Web site: <http://www.ada.org/prof/ed/testing>.

#### Selection factors

VCU is a state-supported, public university and gives admission preference to state residents. All applicants are evaluated by uniform criteria without regard to age, race, color, national origin, gender, religion, sexual orientation, veteran's status, political affiliation or disability. Students are accepted by the Admissions Committee on the basis of excellence of predental education, DAT scores, recommendations, experiences in dentistry and results of personal interviews with members of the committee. The interview process is standardized and designed to determine motivation, knowledge of and interest in the dental profession, and to afford the applicant an opportunity to provide additional information pertaining to his/her application. Selection occurs on a rolling admissions basis, and once the class is complete, an alternate list is created. Members of minority groups underrepresented in dentistry are especially encouraged to apply. Each year a certain number of students who are not accepted into the freshman class are invited to take selected courses with this class. Their performance in these courses plays a vital role in their being considered for the following year's admissions process.

#### Admission with advanced standing

The School of Dentistry will consider applicants for admission with advanced standing on an individual basis depending upon positions available and qualifications of the applicant. Pre-admission evaluation of skills and knowledge by performance testing is required prior to admission consideration.

#### Application procedures

The School of Dentistry participates in the American Association of Dental Schools Application Service (AADSAS). All applicants are required to submit credentials through this service. Re-applicants must also reapply through the application service. Application forms can be obtained from AADSAS, 1400 K St. N.W., Suite 1100, Washington, D.C. 20005 (e-mail to [aadsas.appl@adea.org](mailto:aadsas.appl@adea.org) or call (202) 289-7204, predental advisers in colleges and universities, and the Office of Admissions, School of Dentistry, Virginia Commonwealth University, P.O. Box 980566, Richmond, VA 23298-0566.

Application to the School of Dentistry can be made through AADSAS on or after May 15 and must be received by AADSAS no later than Nov. 1 of the year preceding intended matriculation.

AADSAS compiles academic records and other pertinent information and forwards these with the application to the School of Dentistry. Qualified applicants are then requested to submit supplemental information, such as the VCU supplemental application. The application fee is \$70.

Applicants will be notified of decisions according to guidelines established by the American Association of Dental Schools. The first acceptances are sent out on Dec. 1, and a \$500 deposit (credited to tuition) is required by Jan. 15. After Feb. 1, the deposit must be received within two weeks following notification of acceptance. A second deposit of \$300 credited to tuition is due on May 1. Both deposits are nonrefundable.

A letter of acceptance offers the candidate a position in the class entering for the session cited. Receipt by the Office of Admissions of the initial \$500 nonrefundable tuition deposit within the prescribed period reserves the position in the class. Failure to reserve a position results in that position

being offered to another candidate. A second \$300 nonrefundable tuition deposit initiates active administrative processing of matriculation into the first-year class. Failure to send this deposit results in loss of position, and the position is then offered to another candidate. The act of matriculation also implies a willingness on the part of the student to comply with university rules and regulations, to take an interest in maintaining the ideals of the institution and to conduct himself/herself in a manner befitting a member of the dental profession.

For more information please visit the School of Dentistry Web site at [www.dentistry.vcu.edu](http://www.dentistry.vcu.edu).

#### Financial assistance

A general description of financial aid based on demonstrated need is contained in the Professional Studies at VCU chapter of this bulletin. Financial need-based aid programs available to dental students include Health Professions Student Loans, Loans for Disadvantaged Students, Virginia Rural Dental Scholarship Program, and federal educational loans. Further information may be obtained from the offices of Admissions, Financial Aid and Student Affairs of the School of Dentistry.

#### Honors and awards

The School of Dentistry presents numerous awards, honors and scholarships to students during the academic year. These awards are presented during special school events, including graduation, Student Clinic Day and the Senior Gala. Students who excel in scholarship and leadership also may be eligible for membership in university or school honor societies. In addition, students who meet established criteria may be eligible for scholarships or election to membership in organizations related to dentistry.

**Omicron Kappa Upsilon** is the national honorary dental society. Each year the society selects those students who, in addition to scholarship, have demonstrated exemplary traits of character and potential qualities of future professional growth and attainments.

**Phi Kappa Phi** is a national honor society that recognizes and encourages superior scholarship. It accepts members from applied and professional fields of study, as well as from letters, arts, sciences and humanities. The VCU chapter was installed in 1977.

**Alpha Omega Scholarship Award** is presented to the graduating student who has attained the highest scholastic rating for his/her four years of dental study.

**Harry Lyons Scholarship Award** is awarded to the graduating senior dental student who has attained the highest grade-point average for his/her four years of dental school.

**A. D. Williams Foundation Award** is an annual stipend made to a student in each class who demonstrates, by virtue of high scholastic attainment and professional performance, unusual promise and ability. Character, motivation, intellectual curiosity and realization of the opportunities for intellectual development will be considered in the award, which is made at the end of the academic year.

**O.M. Clough Award** is awarded to a graduating senior dental student for outstanding achievement in restorative dentistry.

**William B. Fitzhugh Scholarship Award** is awarded to an incoming dental student who has demonstrated financial need, preference being given to students who have demonstrated athletic abilities at their undergraduate institution.

**R. Ashton Gay and Henry F. Vaughan Scholarship** is awarded to a student who is a Virginia resident at the VCU School of Dentistry,

demonstrates academic excellence and leadership during the D-1 year, and has demonstrable need of financial assistance at the beginning of the D-2 year.

**Edmond T. Glenn Award** is awarded on the basis of financial need to a student ranked in the upper half of the class at the end of the D-3 year and who has been involved in school/class activities.

**International College of Dentists Award** is presented to the graduating dental student who has shown the most professional growth and development during his/her years of dental study.

**Pierre Fauchard Academy** presents an award to the graduating dental student who has exhibited leadership qualities and through his/her accomplishments has demonstrated dedication to the advancement of dental literature.

**The Richmond Dental Study Club Memorial Endowment Scholarship** is awarded annually to a D-3 (junior) dental student based on his/her having a GPA in the top 25 percent of the class and demonstrating exceptional leadership and participation in school and/or community extracurricular activities at the end of the D-2 (sophomore) year.

**Alexander Kaufman Award** is awarded to a junior dental student based on class leadership and financial need.

**P.D. Miller Award** goes to the dental student judged by faculty as having demonstrated excellent understanding of the relationship between restorative dentistry and periodontics.

**Robert M. Saunders Scholarship** is awarded to a junior or senior Virginia resident predoctoral dental student with excellent academic credentials.

## Curriculum

The curriculum in the dental school is organized into a competency-based, four-year program leading to the doctor of dental surgery (D.D.S.) degree. The academic year begins in July and extends through June. The program emphasizes study in three broad areas: biomedical sciences, clinical sciences and behavioral sciences.

The biomedical sciences include the in-depth study of human anatomy, biochemistry, genetics, material science, microbiology, pathology, pharmacology and physiology.

The clinical sciences prepare the student for the actual practice of dentistry and provide exposure to the various specialties in dentistry.

The behavioral sciences cover such topics as dental health needs, the system of health care delivery, practice management, professional ethics and behavioral factors.

Laboratory and clinical experiences are offered throughout the four years to develop the skills and judgment vital to the practice of general dentistry.

In general, courses offered as part of the curriculum in dentistry are not available to other students in the university. Exceptions may be granted by the dean of the School of Dentistry to students enrolled in graduate degree programs upon written request of the department chair in which the student is seeking a degree.

### Freshman, first semester

	credits
ANAT 501 Gross Anatomy	7.0
ANAT 503 Neuroanatomy	1.5
BIOC 501 Biochemistry	3.0
OCMB 510 Evidence-based Dentistry	1.5
DENS 511 Dentistry and Education	1.0
DENS 515 Introduction to Clinical Dentistry	1.5
HGEN 531 Dental Genetics	2.0

GENP 501 Introduction to Preventive Dentistry	0.5
GENP 510 Dental Materials	2.5
GENP 511 Oral Anatomy and Occlusion	4.0
GENP 512 Operative Dentistry*	

### Freshman, second semester

ANAT 502 Microscopic Anatomy	6.0
DENS 515 Introduction to Clinical Dentistry	1.5
GENP 512 Operative Dentistry	6.5
GENP 514 Fundamentals of Occlusion	3.0
MICR 513 Infection and Immunity in Dentistry	4.0
PHIS 502 Mammalian Physiology	5.0
PATH 601 General Pathology	6.0

### Sophomore, first semester

DENS 621 Occlusion	2.0
DENS 625 Clinical Skills I	1.0
GENP 620 Cariology	3.0
GENP 621 Operative Dentistry	3.0
ORPT 621 Dental Radiology	1.0
ORPT 622 Oral Pathology*	3.0
ORTH 623 Principles of Orthodontics	2.0
PERI 626 Periodontics I	2.0
PHTX 609 Dental Pharmacology and Pain Control*	
PROS 622 Preclinical Fixed Prosthodontics*	
PROS 624 Preclinical Removable Denture Prosthodontics*	

### Sophomore, second semester

DENS 626 Clinical Skills II	2.0
ENDO 622 Principles of Endodontics	2.5
HGEN 631 Advanced Dental Genetics	1.0
ORPT 622 Oral Pathology	2.5
ORSG 622 Introduction to Oral Surgery	1.0
PEDD 622 Introduction to Pediatric Dentistry	2.5
PERI 629 Periodontics II	4.0
PHTX 609 Dental Pharmacology and Pain Control	4.0
PROS 622 Preclinical Fixed Prosthodontics	6.5
PROS 624 Preclinical Removable Prosthodontics	7.5

### Junior, first semester

DENS 735 Patient Management and Professional Conduct	3.0
ENDO 731 Endodontic Therapy	1.0
ENDO 739 Clinical Endodontics III*	
GENP 739 Clinical Operative III*	
GENP 745 Clinical Principles of Restorative Dentistry	1.0
ORPT 737 Radiology Rotation*	
ORSG 731 Medical Management and Emergency Care for the Dental Patient	2.5
ORSG 739 Clinical Oral Surgery III*	
ORTH 739 Clinical Orthodontics III*	
PEDD 733 Advanced Pediatric Dentistry*	
PEDD 739 Clinical Pediatric Dentistry III*	
PERI 733 Periodontics III	1.0
PERI 739 Clinical Periodontics III*	
PHTX 611 Dental Pharmacology and Pain Control	2.0
PROS 731 Complete Denture Prosthodontics	1.5
PROS 735.01 Removable Prosthodontics Diagnosis and Treatment	1.5
PROS 739 Clinical Removable Prosthodontics III*	
PROS 739 Clinical Fixed Prosthodontics III*	

### Junior, second semester

DENS 735 Patient Management and Professional Conduct	3.0
ENDO 739 Clinical Endodontics III	1.5
GENP 739 Clinical Operative III	5.0
GENP 742 Treatment Planning Seminar	2.0
ORPT 732 Clinical Oral Pathology and Oral Medicine	1.0
ORPT 737 Radiology Rotation**	
ORSG 733 Principles of Oral and Maxillofacial Surgery	2.5
ORSG 739 Clinical Oral Surgery III	1.5
ORTH 733 Orthodontic Therapy	1.0
ORTH 739 Clinical Orthodontics III	1.5
PEDD 733 Advanced Pediatric Dentistry	2.0

PEDD 739 Clinical Pediatric Dentistry III	1.5
PERI 739 Clinical Periodontics III	5.0
PROS 739 Clinical Removable Prosthodontics III	3.5
PROS 739 Clinical Fixed Prosthodontics III	2.0
PROS 745 Clinical Principles of Fixed Prosthodontics	1.0

**Senior, first semester**

DENS 745 Patient Management and Professional Conduct	3.0
ENDO 749 Clinical Endodontics IV*	
GENP 740 Practice Management	1.5
GENP 741 Practice Administration	3.0
GENP 743 General Practice Restorative Unit*	
GENP 749 Clinical Operative IV*	
ORPT 747 Radiology Rotation	1.5
ORSG 749 Oral Surgery/Urgent Care Clinic*	
PEDD 749 Clinical Pediatric Dentistry IV*	
PERI 749 Clinical Periodontics IV*	
PROS 749 Clinical Removable Prosthodontics IV*	
PROS 749 Clinical Fixed Prosthodontics IV*	

**Senior, second semester**

DENS 745 Patient Management and Professional Conduct	3.0
ENDO 749 Clinical Endodontics IV	1.5
GENP 743 General Practice Restorative Unit	6.0
GENP 749 Clinical Operative IV	4.0
ORSG 749 Oral Surgery/Urgent Care Clinic	2.0
PEDD 749 Clinical Pediatric Dentistry IV	2.0
PERI 749 Clinical Periodontics IV	4.0
PROS 749 Clinical Removable Prosthodontics IV	4.0
PROS 749 Clinical Fixed Prosthodontics IV	6.0

\* Continues into second semester.

\*\* Completed first semester senior year.

**Academic performance evaluation**

The faculty of the VCU School of Dentistry has the responsibility for evaluating the student's academic performance. It is incumbent on the course directors or their designees to specify, at the time that courses first convene, the criteria to be used in student assessment and the standards by which they will be judged.

The VCU School of Dentistry Guidelines for the Evaluation of Student Performance and Academic Status are distributed to all students at the beginning of their study. They are available upon request from the Office of Academic Affairs, School of Dentistry.

**Advanced Dental Education****Martha C. Clements**

Director, Continuing Education

**Office of Continuing Education**

For every professional person who serves the health sciences, education must be a lifetime commitment.

Graduation from dental school is the beginning of a lifelong educational experience for the serious, conscientious student of dentistry. Regardless of how well prepared a health professional may be at the time of graduation, the adequate knowledge of yesterday is often insufficient information for today and tomorrow. With the rapid advancements made in dental technology and techniques, the professional must constantly seek new knowledge if the health care provider is to improve the health care given to patients.

Although the majority of continuing education courses are presented at the School of Dentistry, some are offered in other locations. The courses, which vary in length from one to four days, are scheduled throughout the year and consist of a variety of instructional methods from didactic to hands-on participation in clinical programs.

The instructional staff is comprised of faculty from the VCU School of Dentistry, guest lecturers from other dental schools, and members of the dental profession and related professions from the United States and other countries.

**Advanced Dental Education programs**

The School of Dentistry provides advanced dental education programs in the areas of endodontics, oral and maxillofacial surgery, orthodontics, pediatric dentistry, periodontics, and advanced education in general dentistry (AEGD). Satisfactory completion of the program leads to the award of a certificate of training and certifies eligibility for examination by the appropriate specialty board. All programs are accredited by the Commission on Dental Accreditation of the American Dental Association. Those enrolled in the advanced education programs are full-time resident trainees, considered to be the equivalent of full-time students. Under special circumstances, trainees may be accepted into some programs on a part-time basis.

Students enrolling in endodontics, orthodontics, pediatric dentistry and periodontics also are awarded a Master of Science in Dentistry degree upon completion of the requirements for the certificate and successful defense of a thesis. The certificate program and Master of Science in Dentistry degree must be completed concurrently. See the School of Dentistry Graduate Program for more information on the Master of Science in Dentistry degree program.

Applications for admission should be directed to the director of the appropriate program, School of Dentistry, Virginia Commonwealth University, P.O. Box 980566, Richmond, VA 23298-0566. Successful completion of Part II of the National Board Dental Examination is required prior to admittance to the program.

**Advanced Education in General Dentistry****Debra R. Haselton**

Associate Professor and Program Director

The purpose of this 12-month Advanced Dental Education residency program is to provide advanced education and clinical experience to prepare dental school graduates for a career in the practice of comprehensive, general dentistry. This program has a strong emphasis on treatment planning, experience with new technology, developing skills in aesthetic dentistry and restoration of dental implants. Graduates of this program will have attained added competency and confidence in all areas of dental care, practice management and professional responsibility. Further, this program provides residents with meaningful experiences in the delivery of dental care to diverse populations and people at high risk for dental disease. A strong affiliation exists between the School of Dentistry and the statewide Virginia Area Health Education Center (AHEC), whose mission is to increase primary health care in underserved areas. The AEGD program works in concert with AHEC to deliver dental care and recruit/train minority health care providers from health professional shortage areas.

The School of Dentistry is committed to advanced dental education. The residents will receive hands-on experience with diagnostic and therapeutic care of special patient populations in addition to extensive training in the art and science of general dentistry. AEGD residents may be required to participate in off-site clinical experiences outside the city of Richmond, Va.



Funds will be provided for travel and lodging when required.

### Eligibility and selection

Dentists with the following qualifications are eligible to apply for the AEGD program: Dental graduates from institutions in the United States accredited by the Commission on Dental Accreditation of the American Dental Association and who have passed Part I of the National Board Examination.

Selection criteria include: didactic and clinical achievements, extramural experience, interpersonal skills and a demonstrated commitment to pursue a career in general dentistry. Every effort is made to recruit qualified applications from minority dentists and dentists from health professional shortage areas or dentists who profess a desire to serve in these areas. A selection committee consisting of the program director, the assistant dean for admissions, members from specialty areas, former residents and current residents will screen all applications. Using the above-mentioned selection criteria, the most promising applicants will be invited for personal interviews. Trainees and alternates will be selected. This program participates in the Postdoctoral Application Support Service Program. Telephone (804) 828-3601; fax (804) 828-3159; e-mail [drhaselton@vcu.edu](mailto:drhaselton@vcu.edu).

### Endodontics

#### Frederick R. Liewehr

Professor and Department Chair, Endodontics

The Advanced Dental Education Program in Endodontics offers the student a comprehensive 24-month course of study in clinical, didactic and research endodontics. The program is designed to educate qualified individuals to pursue careers as educators, researchers and practicing clinicians, and meets the educational requirements for limitation of practice to the specialty of endodontics and examination by the American Board of Endodontics. The program is composed of several interrelated phases. The first phase consists of lecture courses that provide the student with a firm biological basis for patient care. The second phase consists of lectures, seminars and clinical training designed to produce clinical mastery of endodontics. The third phase is research experience gained through completion of an individual research project and master's thesis.

Students completing the program earn a specialty certificate in endodontics and a Master of Science in Dentistry degree. Students must complete the requirements for the master's degree prior to being awarded the specialty certificate.

The program conforms to the Standards for Advanced Specialty Education in Endodontics and carries a full approval status from the Commission on Dental Accreditation of the American Dental Association.

### Oral and Maxillofacial Surgery

#### Robert A. Strauss

Professor and Program Director

The oral and maxillofacial surgery program is designed to provide extensive didactic and clinical experience in all aspects of the specialty. Those who complete training satisfactorily fulfill the prerequisites for examination and certification by the American Board of Oral and Maxillofacial Surgery.

The didactic portion of the program includes formal courses in oral pathology, anatomy and physical diagnosis, as well as numerous weekly conferences and seminars. Clinical rotations on oral pathology,

anesthesia, medicine, surgical oncology, neurosurgery, cardiology, general surgery, emergency room and the trauma services are used to supplement the trainee's surgical experience. Throughout the program there is a constant correlation of the clinical experience with the biomedical sciences.

Through the multiple clinical and didactic facilities of the VCU Medical Center complex, the McGuire Veterans Affairs Medical Center, and St. Mary's Hospital, there is ample material for education in the latest oral and maxillofacial surgical techniques. The oral and maxillofacial surgery service is responsible for diagnosis and management of diseases and injuries related to the oral and facial region. Trainees are involved in all aspects of treatment including simple and complicated oral surgery, anesthesia and pain control, oral and maxillofacial trauma, preprosthetic surgery, orthognathic surgery, head and neck pathology, oral and maxillofacial reconstruction, temporomandibular joint surgery, laser surgery, cosmetic facial surgery, and microneural and microvascular surgery. During the four years, the trainee assumes ever-increasing responsibilities as time and abilities dictate.

Upon satisfactory completion of the four-year residency, the trainee may earn the Doctor of Medicine degree from the School of Medicine by enrolling in the second and third years of that curriculum.

### Orthodontics

#### Bhavna Shroff

Professor and Program Director

The Department of Orthodontics at VCU's MCV Campus offers a 24-month advanced education in orthodontics and Master of Science in Dentistry program. The program teaches state-of-the-art clinical care in an environment modeled after private orthodontic practice. The curriculum is composed of seminars and small-group instruction with emphasis on critical thinking and problem solving. Contemporary concepts of orthodontic treatment are reviewed for substantive and scientific content. Also included are regularly scheduled orthognathic surgery conferences and seminars with other dental and medical specialists.

The postgraduate program is designed to develop skilled practitioners who are prepared to grow with the future and manage busy orthodontic practices. The goal is not only to familiarize future orthodontists with contemporary techniques but also to teach them how to interpret cutting-edge scientific information and use it to approach clinical challenges logically and practically. Clinical experience consists of a wide variety of orthodontic patients, including complex cases requiring orthognathic surgery and patients with facial clefts and other craniofacial abnormalities. An original research experience is an integral part of the program, with each project intended to produce results suitable for publication in a nationally circulated orthodontic journal. The successful completion of a research project is a requirement of the program. All senior residents present their research at the Virginia Association of Orthodontists meeting. The program qualifies students to take the written portion of the American Board of Orthodontics examination in the senior year. Residents are required to take the written portion of the American Board of Orthodontics examination prior to graduation, and are encouraged to continue and complete the board certification process. This exam is given prior to the American Association of Orthodontists meeting.

Students completing the program earn a specialty certificate in orthodontics and Master of Science in Dentistry degree. Students must complete the requirements for the master's degree prior to being awarded the specialty certificate.

The program is accredited by the Commission on Dental Accreditation of the American Dental Association.

## Pediatric Dentistry

**Michael D. Webb**

Associate Professor and Program Director

The Advanced Education Program in Pediatric Dentistry offers the student a comprehensive 24-month course of study in clinical and didactic pediatric dentistry. The program is designed to meet the educational requirements for limitation of practice to the specialty of pediatric dentistry and examination by the American Board of Pediatric Dentistry. The program emphasizes a diversified educational experience. The program places emphasis on all phases of pediatric dentistry including trauma, preventive dentistry, restorative, endodontics, periodontics, oral surgery, orthodontics and hospital dentistry. The program enables the student to provide comprehensive oral health care for the well child, the medically compromised and children with special needs. There is extensive use of various treatment modalities for pain control and behavioral management, such as sedation, analgesia and general anesthesia. Research experience is gained through completion of an individual research project and master's thesis.

Seminars are held in pediatric dentistry, orthodontic diagnosis and treatment, treatment planning, growth and development, cephalometric analysis, pediatric dentistry literature review, and behavior guidance. Formal courses in biostatistics, principles of pediatrics, pediatric advanced life support, head and neck anatomy, neurodevelopmental disabilities, leadership seminars, basic sciences, and clinical core courses are required. The students participate in undergraduate clinical teaching and supervision.

One-month rotations occur in general anesthesia, and two-week rotations occur in the pediatric emergency room, pediatric medicine and oral pathology. During the year, rotations in cleft palate, craniofacial anomalies and hemophilia occur. Optional elective rotations are available in treating institutionalized handicapped patients (in Lynchburg) and in providing treatment in rural areas that have low access to dentistry on the school's mobile dental van. Elective didactic courses also are available.

Students completing the program earn a specialty certificate in pediatric dentistry and a Master of Science in Dentistry degree. Students must complete the requirements for the master's degree prior to being awarded the specialty certificate.

The program is accredited by the Commission on Dental Accreditation of the American Dental Association.

## Periodontics

**Thomas C. Waldrop**

Professor and Program Director

The advanced education program in periodontics consists of a 36-month clinical and didactic curriculum leading to a certificate in periodontics. Students are responsible for all materials and make up of lost clinical time. Courses in the basic and clinical sciences, medicine, head and neck anatomy, statistics, and advanced cardiac life support are required. Students are responsible for attending and preparing for lectures, current and periodontal literature, medical-oral medicine, treatment planning, case presentation, and surgical seminars. No grade less than 80 percent or passing is acceptable from any periodontal or basic science course work. Less than passing grades may require retesting or retaking of a course. Students are expected to be able to utilize a computer to prepare lectures and to access Internet resources.

Students are responsible for documentation of clinical and course work data. Specified digital intra-oral camera and documentation of all clinical

cases and department archiving is required. Students are responsible to the service for rotations in general medicine, dental anesthesiology and oral pathology. Proficiency and certification in intravenous conscious sedation is required. Students are responsible for clinical and classroom teaching to undergraduate and specialty students. Research on a topic that is reviewed and approved by a faculty committee is required. Upon completion of the research, the student is required to prepare a thesis, defense and manuscript for publication. Certificates are not awarded until completion of the Master of Science in Dentistry requirements. Students are responsible for the purchase of program-required equipment, instruments, books and all associate fees. All students are required to become student members of the American Academy of Periodontology.

## Combined Master of Science (M.S.)/Doctor of Philosophy (Ph.D.) and Doctor of Dental Surgery (D.D.S.)

In cooperation with the School of Dentistry, students in dentistry with an interest in academic and research careers are afforded the opportunity to undergo advanced degree training while in dental school or residency. Admission of students enrolled in the School of Dentistry to combined degree programs is processed through the Office of Graduate Education of the School of Medicine by established procedures. The Dental Aptitude Test may be accepted in lieu of the GRE as an admission requirement. No application fee is required of students already regularly enrolled as degree-seeking graduate students at the university.

The requirements for a combined professional school/graduate school degree in basic health sciences are equivalent to those required of students seeking a graduate degree alone and are determined by the individual departments. A time limit of five calendar years for the M.S. and seven calendar years for the Ph.D. degree, beginning at the time of first registration in the graduate school, applies to work to be credited toward degrees for students in combined programs.

## Dentistry, Master of Science in (M.S.D.)

### Admission requirements summary

#### Dentistry, Master of Science in (M.S.D.)

Indicate specialization:

The master's degree program is offered concurrently with the advanced dental education programs in endodontics, orthodontics, pediatric dentistry and periodontics. Students completing these programs are awarded a specialty certificate and a Master of Science in Dentistry (M.S.D.) degree. The certificate and degree programs must be completed concurrently.

Applications for admission should be directed to the director of the appropriate program, School of Dentistry, Virginia Commonwealth University, P.O. Box 980566, Richmond, VA 23298-0566. Successful completion of Part II of the National Board Dental Examination is required prior to admittance to the program.

For more information on these advanced dental education programs see the School of Dentistry Advanced Dental Education programs section of this bulletin.

### Admission requirements

Students must first be accepted into one of the advanced dental education programs in endodontics, orthodontics, pediatric dentistry or periodontics.

Once accepted, students are automatically enrolled in the master's degree program in the Graduate School. A separate application and fee are required for admission to the Graduate School.

## Degree requirements

1. The student must complete all course work for the particular advanced dental education program.
2. The student must initiate, develop and complete an original scientific study.
3. The student must complete a thesis according to the Graduate School's guidelines.
4. The student must pass the final defense of the thesis.
5. The student must maintain a cumulative GPA of 3.0.

## Thesis adviser and committee

Students receive guidance and counsel from the director of their program. The program director holds primary responsibility for monitoring the development of the student in the program and providing appropriate guidance and counsel essential to the scholarly development of the student.

A thesis advisory committee, appointed shortly after the student enrolls, serves as both an examining and consultative body, functioning to assist the student with development of their research.

Each student shall have a thesis adviser and advisory committee. In many cases, the program director also will serve as the thesis adviser.

The student's thesis adviser shall be appointed by the program director. The adviser must be a member of the regular graduate faculty (not affiliate). Appointment should be made by the beginning of the spring semester of the first year.

The adviser shall, with the student's advisory committee, have responsibility for guiding the student's research. The adviser will identify members of the faculty to comprise the advisory committee. The adviser will serve as the chair of the committee. The adviser will supervise the student's research work and thesis preparation and be one of the examiners of the thesis defense.

The student's advisory committee shall be appointed no later than the midpoint of the spring semester of the first year. Exceptions to this rule must be approved by the program director and thesis adviser. The committee shall consist of a minimum of three members as follows: the student's thesis adviser; two members from the graduate faculty, one of which must be from the department/program. Adjunct faculty can be appointed to the graduate faculty as an affiliate member for the purpose of serving on an individual student's advisory committee.

The advisory committee functions as an advisory body to ensure that timely progress toward completion of the thesis is being achieved. It is the student's responsibility to stay in contact and meet regularly with the committee. The advisory committee serves as a scientific consultative body and conducts the final examination of the thesis work.

**Degree:**Semester(s)**Deadline**Test  
of entry: dates: requirements:  
M.S.D. Fall Sep 15 NDBE

## Orthodontics

### Admission requirements summary

**Orthodontics**  
**Degree:**Semester(s)**Deadline**Test  
of entry: dates: requirements:  
M.S.D. Fall Sep 15 NDBE

## Pediatric Dentistry

### Admission requirements summary

**Pediatric Dentistry**  
**Degree:**Semester(s)**Deadline**Test  
of entry: dates: requirements:  
M.S.D. Fall Oct 1 NDBE

## Periodontics

### Admission requirements summary

**Periodontics**  
**Degree:**Semester(s)**Deadline**Test  
of entry: dates: requirements:  
M.S.D. Fall Sep 1 NDBE

## Department of Endodontics

**Karen Replogle**  
Assistant Professor and Interim Department Chair

### Courses in endodontics (ENDO)

ENDO 622 Principles of Endodontics  
ENDO 731 Endodontic Therapy  
ENDO 739-749 Clinical Endodontics

## Department of General Practice

**Alfred Certosimo**  
Assistant Professor and Department Chair

### Courses in general practice

DENS 515 Introduction to Clinical Dentistry  
DENS 625 Clinical Skills I  
DENS 626 Clinical Skills II  
GENP 302 Dental Materials (Dental Hygiene)  
GENP 307 Research Design and Biostatistics (Dental Hygiene)  
GENP 501 Introduction to Preventive Dentistry  
GENP 510 Dental Materials (Dental)

## Endodontics

### Admission requirements summary

Endodontics

GENP 511 Oral Anatomy and Occlusion  
 GENP 512 Operative Dentistry  
 GENP 620 Cariology  
 GENP 621 Operative Dentistry  
 GENP 739-749 Clinical Operative  
 GENP 740 Practice Management  
 GENP 741 Practice Administration  
 GENP 742 Treatment Planning Seminar  
 GENP 743 General Practice Restorative Unit  
 GENP 745 Clinical Principles of Restorative Dentistry

## Department of Oral and Maxillofacial Surgery

**A. Omar Abubaker**  
 Associate Professor and Department Chair

### Courses in oral and maxillofacial surgery

ORSG 622 Introduction to Oral Surgery  
 ORSG 731 Management of the Medically Compromised Patient  
 and Medical Emergencies in the Dental Office  
 ORSG 733 Principles of Oral and Maxillofacial Surgery  
 ORSG 739 Oral Surgery/Urgent Care Clinic  
 ORSG 749 Oral Surgery/Urgent Care Clinic

## Department of Oral Pathology

**James C. Burns**  
 Professor and Department Chair

### Courses in oral pathology (ORPT)

ORPT 621 Dental Radiology  
 ORPT 622 Oral Pathology  
 ORPT 732 Clinical Oral Pathology and Oral Medicine  
 ORPT 737-747 Radiology Rotation

## Department of Orthodontics

**Steven J. Lindauer**  
 Professor and Department Chair

### Courses in orthodontics (ORTH)

ORTH 623 Orthodontics  
 ORTH 733 Orthodontic Therapy  
 ORTH 739 Clinical Orthodontics

## Department of Pediatric Dentistry

**John H. Unkel**  
 Associate Professor and Department Chair

### Courses in pediatric dentistry (PEDD)

PEDD 622 Introduction to Pediatric Dentistry  
 PEDD 733 Advanced Pediatric Dentistry  
 PEDD 739-749 Clinical Pediatric Dentistry

## Department of Periodontics

**Harvey Schenkein**  
 Paul Tucker Goad Professor, Assistant Dean for Research and  
 Department Chair

### Courses in periodontics (PERI)

PERI 326 Periodontics (Dental Hygiene)  
 PERI 329 Periodontics II (Dental Hygiene)  
 PERI 626 Periodontics I  
 PERI 629 Periodontics II  
 PERI 733 Periodontics III  
 PERI 739-749 Clinical Periodontics

## Department of Prosthodontics

**John W. Unger**  
 Professor, Eminent Scholar and Department Chair

### Courses in prosthodontics (PROS)

PROS 622 Preclinical Fixed Prosthodontics  
 PROS 624 Preclinical Removable Prosthodontics  
 PROS 731 Complete Denture Prosthodontics  
 PROS 735 Removable Prosthodontics Diagnosis and Treatment  
 PROS 739-749 Clinical Removable Prosthodontics  
 PROS 739-749 Clinical Fixed Prosthodontics  
 PROS 745 Clinical Principles of Fixed Prosthodontics

### Conjoint courses

DENS 511 Dentistry and Education  
 DENS 515 Introduction to Clinical Dentistry  
 DENS 621 Occlusion  
 DENS 735, 745 Patient Management and Professional Conduct  
 DENS 625 Clinical Skills I  
 DENS 626 Clinical Skills II  
 OCMB 510 Evidence-based Dentistry

# School of Education

The School of Education was established officially in 1964 as a part of the Richmond Professional Institute. In 1968, by action of the state legislature, the School of Education became a part of the newly formed Virginia Commonwealth University. In November 1975, the school moved its administrative offices to the present location in Oliver Hall on the Monroe Park Campus of VCU.

The central focus of the School of Education is on providing services to prospective and experienced professionals in education, including adult education and human resource development, health and movement sciences, leisure service management, sport leadership, and therapeutic recreation. The School of Education has a commitment to preparing high-quality professionals for urban, suburban and rural areas.

## Administration

1015 West Main Street  
P.O. Box 842020  
Richmond, Virginia 23284-2020  
(804) 828-3382  
Fax (804) 828-1323  
[www.soe.vcu.edu](http://www.soe.vcu.edu)

**Beverly J. Warren**  
Interim Dean

**Henry T. Clark III**  
Associate Dean for Academic Affairs

**Diane J. Simon**  
Associate Dean for Student Affairs

## Accreditation

Education (all degrees)  
National Council of Accreditation for Teacher Education (initial licensure and advanced degrees for school personnel), the Virginia Department of Education and the Southern Association of Schools and Colleges

Athletic Training (bachelor's degree)  
Commission on Accreditation of Allied Health Education Programs

Recreation and Park Management, Therapeutic Recreation (bachelor's degree)  
Council on Accreditation National Recreation and Park Association/American Association for Leisure and Recreation

The school holds membership in the American and Virginia Association of Colleges of Teacher Education and in the Holmes Partnership.

## Values statement

The Virginia Commonwealth University School of Education is dedicated to the preparation of professional educators and clinicians, the ideals of academic scholarship, and the worthiness of service. Through our work in these areas, we recognize our responsibilities to students, university colleagues, the community at large, and professional organizations. While all of us share common values, the statements below intentionally allow for a variety of interpretations that may be influenced by our assignments, our experiences, and our philosophical principles within programs and across the School of Education.

We demonstrate our belief in the value of high quality programs by:

- attracting high quality students;
- being responsive to the external standards of accrediting and professional organizations;

- providing meaningful clinical placements;
- continually evaluating, assessing and improving programs and services.

We demonstrate our belief in the value of high quality teaching by:

- creating an environment that supports student success;
- demonstrating a variety of effective teaching strategies, including technology integration, universal design for learning and student-centered instruction;
- fostering curriculum development that ensures familiarity with best practice across all disciplines.

We demonstrate our belief in the value of diversity by:

- preparing students to work in culturally and linguistically diverse settings;
- accommodating students with special learning needs;
- promoting a diverse student and faculty community;
- supporting intellectual curiosity;
- modeling and promoting social justice.

We demonstrate our belief in the value of high quality scholarship and, in particular, the value of research culture by:

- conducting relevant, high quality research that is responsive to the metropolitan community and contributes to the disciplines;
- encouraging collaborative research with colleagues, practitioners and students;
- supporting the creation, interpretation and dissemination of knowledge;
- integrating current research into teaching.

We demonstrate our belief in the value of collaboration and partnerships by:

- serving as a resource for the development of policy, curriculum, instructional practice and professional standards;
- providing leadership and professional outreach to organizations, the university and the community at large;
- maintaining partnerships and shared responsibility for professional preparation.

We demonstrate our belief in the value of critical reflection by:

- observing ethical practice and professional honesty;
- encouraging students to exhibit dispositions consistent with accepted professional practice;
- fostering a trusting, safe community of scholars;
- engaging in ongoing professional development;
- examining professional practices.

## Educator as critically reflective practitioner

The guiding theme of educator preparation programs in the School of Education is educator as critically reflective practitioner. Courses and experiences provide opportunities for individuals to consider means of building on appropriate knowledge to make instructional, assessment, counseling and leadership decisions.

## Organization

The chief administrative office for the School of Education is the Office of the Dean. The school is organized for the management of instruction and degree programs into six departments:

- Department of Counselor Education
- Department of Educational Leadership
- Department of Foundations of Education
- Department of Health and Human Performance
- Department of Special Education and Disability Policy
- Department of Teaching and Learning

The departments are led by department chairs with faculty assuming responsibility for curriculum and program advisement. The Offices of Business Services and Student Services provide support for the academic research and service initiative in the School of Education.

## Facilities

The School of Education is housed primarily in Oliver Hall, where classroom, laboratory and activity centers, and faculty and administrative offices can be found. Clinical laboratories for the Departments of Exercise Science, Recreation, Park and Sport Management, and Teacher Education in Health and Physical Education are located in the Franklin Street Gymnasium.

## Support/resource offices

Various resource offices have been developed in the School of Education to provide support services for students, faculty and programs. These support units include the Office of Student Services, Office of Business Services, the Office of Doctoral Studies, School of Education Associates Office and the Instructional Technology Center, which includes two computer laboratories.

## Student Services Center

### Program and test information

The Student Services Center provides basic information regarding the programs offered by the School of Education. Students may obtain various program forms in this office. Information regarding the Praxis series, Graduate Record Examination (GRE) and the Miller Analogies Test (MAT) also can be obtained here.

### Placements

Placements for students in practica, internships and externships are coordinated through the Student Services Center. These placements are primarily in school systems and other educational facilities located in the city of Richmond and the counties of Chesterfield, Hanover and Henrico.

## Financial aid

Information and applications for certain assistantships, fellowships and scholarships that are available to School of Education students can be obtained in the Student Services Center. All require that applicants be fully admitted to a program within the School of Education in order to be eligible. In addition to School of Education awards, each department may have grant-funded, student worker positions available. For information on these opportunities, contact the appropriate department chair.

Information on financial aid administered by the university can be found in the [Graduate Studies at VCU](#) section of this bulletin.

## Licensure and endorsement

The Student Services Center serves as the resource for information, materials and applications for those students seeking licensure and/or endorsement for educational personnel in Virginia.

## Doctoral Studies Office

The Doctoral Studies Office is responsible for the administration of the Ph.D. in Education and Ph.D. in Rehabilitation and Movement Sciences. Refer to the Ph.D. in Education and Ph.D. in Rehabilitation and Movement Sciences sections of the bulletin for further information on the programs.

## School of Education Associates

The School of Education Associates Office is the contact for conducting School of Education off-campus related degree cohort programs, courses for credit and other professional development in-service workshops. Many off-campus partnerships and grant-funded projects also are coordinated and managed. The major emphasis is serving the community of K-through-12 administrators, teachers and staff in Central Virginia. Additionally, distance learning using various forms of technologies is being developed and offered by this office.

## Instructional Technology Center

The Instructional Technology Center (ITC) provides educational technology and media support to students, faculty and staff in the School of Education. Within the ITC are four components, each serving the school in unique ways.

The Computer Teaching Lab is a state-of-the-art computer facility where faculty help prospective teachers learn how to use computer technology in classrooms. The Open Computer Lab is available for student use approximately 14 hours each day.

The Infusio Lab enables students to participate in real-time distance learning activities. The fourth component, Computing Services, has the responsibility for maintaining all of the computers and related equipment in the School of Education.

## Centers and institutes

Programs, resources, and scholarly and service endeavors of the school are extended by a number of academies, centers, institutes and programs directed by the faculty. These centers and institutes include:



Behavioral Intervention Program  
 Career Connections Techlink  
 Center for School-Community Collaboration  
 Central Virginia Leadership Academy  
 Commonwealth Educational Policy Institute  
 Metropolitan Educational Research Consortium  
 Metropolitan Educational Training Alliance  
 Partnership for Persons with Disabilities  
 Professional Opportunities for Developing Excellent Teachers:  
   English Second Language  
 Rehabilitation Research and Training Center  
 Training and Technical Assistance Center  
 Virginia Adult Learning Resource Center

## Admission procedures for graduate study

### Application procedures

Application forms and instructions for applying to all graduate programs are available on the Graduate School Web site at [www.vcu.edu/graduate](http://www.vcu.edu/graduate). Note that applications cannot be processed until they are complete (including test scores). Admission information specific to each program can be found in the division section of this bulletin.

### Test scores

Either the GRE, General Aptitude portion, or the MAT is required for the Master of Teaching, the Master of Education, the Master of Science, the Post-masters Certificate for Principals and Supervisors, the Post-masters Certificate in Reading, the Post-baccalaureate Certificate in Teaching and the Post-baccalaureate Certificate in Instructional Technology. The Ph.D. program requires the GRE, General Aptitude portion.

A passing score on Praxis I, although not required for graduate admission, is required for placement in clinical experiences (practica, internships and certain externships) as well as for licensure in Virginia. Contact the Student Services Center for applications for Admission to Teacher Preparation, booklets on Praxis I and Praxis II, and information regarding offerings of the Praxis examinations by paper and pencil or by computer. Information about the tests may be obtained in the Student Services Center as well.

### Application deadlines

The following application deadlines have been established for the Master of Education, the Master of Science, the Master of Teaching and the Post-baccalaureate Certificate in Teaching.

Mar 15 Summer session or fall semester term of entry  
 Nov 1 Spring semester term of entry

The Ph.D. in Education has the following application deadline:

Jan 15 Fall semester term of entry

Students who are unable to enroll for the semester for which they are accepted must request a deferment.

### General admission requirements

The admission decision will be made on an overall analysis of the following for each degree program. See each division section for any additional information.

## Master of Teaching, Master of Education, Master of Science, Post-master's Certificate for Principals and Supervisors, Post-master's Certificate in Reading, Post-baccalaureate Graduate Certificate in Instructional Technology and Post-baccalaureate Graduate Certificate in Teaching

- A minimum GPA of 3.0 on a 4.0 scale on the last 60 semester hours of study.
- Applicants whose GPA during the last 60 hours of course work falls between 2.8 and 2.99 on a 4.0 scale will be considered for provisional admission. See the Graduate Studies at VCU chapter of this bulletin for further information on provisional admission.
- Scores on the GRE or the MAT.
- An interview with the applicant may be required by the faculty of the program to which the applicant is seeking admission.

### Ph.D. in Education

Refer to the Ph.D. in Education program section of this bulletin for admission requirements.

### Ph.D. in Rehabilitation and Movement Science

Refer to the Ph.D. in Rehabilitation and Movement Science section of this bulletin for admission requirements.

### Advising and student program planning

All students admitted to the School of Education are assigned advisers. Students are expected to work with their adviser to plan their programs of study. Each graduate program agreement, or changes thereto, must be approved by the adviser and the appropriate department chair, or the associate dean for academic programs. Courses taken without approval are taken at the student's risk. Each student is required to complete and file a program plan with the department before the completion of the sixth credit hour.

### Steps to completing M.Ed. and M.S. degrees

Step	When	Where
1. Admission	0-6 hours	Student Services Center
2. Program of studies	0-6 hours	With adviser, approved by department chair
3. Candidacy	12-18 hours	Application approved by adviser, core coordinator, department chair
4. Comprehensive examination*	30 hours	Application to department office
5. Externship or internship	Usually the last semester of course work	Application from Office of Student Services
6. Graduation	Last semester of course work; see current bulletin for deadline	Application from registrar (approved by adviser, department chair, dean's office and returned to registrar)

\* Not required in M.S. in Recreation, Parks and Sport Management, and M.Ed. in Special Education and being phased out in the M.Ed. in Curriculum and Instruction.

The chart outlines the general steps to completing the Master of Education and the Master of Science degrees. All other graduate-level students in the School of Education should refer to the appropriate section of this bulletin for information specific to these programs.

### Admission to candidacy

Admission to graduate study in the Master of Education or Master of Science programs does not constitute candidacy for a degree. Rather, students who have been admitted to graduate study are advanced to degree candidacy upon the recommendation of the adviser, core faculty and department in which the degree is sought.

Advancement to degree candidacy requires that students must have completed at least 12 but no more than 18 semester hours of graduate study with a minimum GPA of 3.0; must have demonstrated clearly the aptitude and ability to pursue graduate study, including independent study; must have exhibited a commitment to their profession; and must have demonstrated promise for a successful career in the field selected in terms of temperament and personality. Specific courses may be required prior to application for candidacy. Admission to degree candidacy is not an automatic process. Students must file an approved application for candidacy with their departments. Only students who have been admitted to candidacy may pursue additional work toward the degree.

### Comprehensive examination

- Some students in a Master of Education or Master of Science in Health and Movement Science program must take a three-hour written comprehensive examination.
- Written examinations will be given on the first Saturday in November, the fourth Saturday in March, and the second Saturday in July. Students must notify the department in writing of the intention to take the examination at least 30 days prior to the published date. All comprehensive examinations must be taken on dates indicated except for religious or health reasons. Any exceptions must be approved in advance by the department chair.
- A minimum of three faculty members, designated by the core faculty, will evaluate each examination independently. Satisfactory performance on the comprehensive examination requires approval of two of the three evaluators.
- Any student failing the comprehensive examination must have a joint conference with at least two core faculty members, one of whom is the student's adviser, before taking the comprehensive examination again.
- During the conference, the core faculty members may recommend additional academic preparation and/or competencies that must be met by the student prior to retaking the comprehensive examination.
- The student will be notified by letter of the recommendations made by the core faculty in the conference.

The student will have only two opportunities to take the comprehensive examination. Failure to pass the comprehensive examination the second time will result in the student being dropped from the degree program.

### Awards

The **Virginia Arnold Scholarship** is awarded annually to one or more outstanding students who demonstrate financial need and who are enrolled in either the early or middle education teacher preparation program. It is supported by an endowment created by Arnold, a former VCU faculty member.

The **William C. Boshier Jr. Scholarship** is awarded annually to an outstanding student in the Educational Leadership program. The endowed scholarship was created through contributions from friends and family of Dr. Boshier.

The **Pearl Burford Scholarship** was established by her former students at Richmond Professional Institute. It is awarded to students planning to become elementary teachers.

The **Jack A. Duncan Scholarship** is awarded annually to a student in the M.Ed. in Counselor Education program who possesses promise as an effective school counselor in the future. Applicants must have a GPA of 3.0 or higher and be able to demonstrate personal and academic qualities predictive of success as a counselor. The scholarship honors Dr. Jack Duncan, professor emeritus of counselor education.

**Patricia H. Duncan Scholarship**, established by friends and colleagues of Duncan, was endowed in 2000. This scholarship, in the endowed amount of \$500, is awarded to graduate students who have an interest in language arts education.

The **Fleming Scholarship** was established to honor Drs. Gladys and Robert Fleming, long-time professors in the School of Education, who exemplified the value of the arts and humanities in their teaching. The award is given annually to a graduate student in administration and supervision, adult education, or counselor education. The successful applicant must demonstrate a commitment to humanities education and must be registered for six or more credit hours.

The **Arnold P. Fleshood Scholarship** is awarded annually to a graduate student in the School of Education in reading/language education or a related field with an interest in reading/language arts.

The **Howard G. Garner Scholarship** for Developmental Disabilities and Interdisciplinary Studies was established in honor of Dr. Howard G. Garner — a former faculty member and the first director of the Virginia Institute for Developmental Disabilities — by friends and family of Garner. This \$500 endowed award provides financial assistance for a trainee at the graduate or advanced level of education to pursue or continue interdisciplinary study in the field of developmental disabilities.

The **Health and Physical Education Scholarship**, endowed in the spring of 1994, is awarded to an outstanding education student majoring in a health or physical education subject area. Preference will be given to undergraduate health and physical education majors classified at sophomore, junior or senior level and have a 2.5 overall GPA. This scholarship is intended to benefit academically talented students who also have been active in university and community service.

The **Jessie Hibbs Scholarship** is funded by the VCU-MCV Women's Club. This scholarship is awarded to a female graduate student with dependent child(ren) who is enrolled in a graduate program on the Monroe Park Campus. The School of Education Scholarship Committee nominates one candidate for this university-wide competition. Applicants must be Virginia residents as determined by Records and Registration and be eligible for financial assistance as determined by the Office of Financial Aid.

The **N. Thelma Jones Scholarship** is awarded annually to an outstanding fifth-year student in the Master of Teaching program (secondary

education). The scholarship is supported by an endowment honoring this former teacher by her brother.

The **Claire McCarthy Recreation Scholarship** was established in 1964. This scholarship was created to honor Claire McCarthy, one of the first graduates of the recreation curriculum. She also served in the Richmond Department of Recreation and Parks for many years. Following her death in 1964, members of the community established this scholarship fund for outstanding upper-level recreation majors. Applicants must be enrolled as full-time Recreation, Parks and Sport Leadership majors, have completed 60 or more credit hours prior to the semester of the award; have a grade point average of 2.5 in both major and overall course work; and be able to demonstrate motivation, need and suitability for a career in recreation.

The **Ann Elizabeth Marston Scholarship** is awarded annually to a student planning a career in elementary or secondary education and who demonstrates both leadership qualities and a need for financial assistance. The award is supported by an endowment established by Dr. and Mrs. Robert A. Wilson in memory of his aunt who helped finance his education.

The **S. Virginia and Berta M. Newell Endowed Scholarship** is awarded annually to an outstanding student in a teacher preparation program in either early or middle education, who demonstrates financial need. It is supported by an endowment from their brother honoring his sisters who graduated from Richmond Professional Institute.

Sponsored by the VCU Chapter of Phi Delta Kappa, the **Phi Delta Kappa Scholarship Grant for Prospective Educators (VCU Chapter)** is awarded to an excellent education student who is interested in teaching or professional education as a career. The primary criteria used to select the recipient of this \$1,000 endowed award will include scholarship, recommendations, written expression, interest in teaching or professional education as a career, and school and community activities.

**Richard J. Rezba Scholarship in Science Education** was established in 2003 to honor Rezba on his retirement. Known nationally as a science educator, Rezba has long been considered one of the outstanding science educators in Virginia. Applicants must be enrolled as full-time science education graduate students in either the M.T. or M.Ed. Programs in curriculum and instruction.

The **Seyfarth Family Scholarship** was established in memory of Susanna Seyfarth by her husband, Dr. John T. Seyfarth, and by other surviving family members and close friends. Applicants must be admitted to the Educational Leadership Track of the Ph.D. in Education program, have a GPA of 3.5 or above, and be committed to a career in public education.

The **Office of Student Services** administers funds made available through the State Council of Higher Education in Virginia Tuition Scholarship Program. SCHEV tuition assistance monies are only available to full-time master's and Ph.D. students who have been admitted to the school with no provisions. The SCHEV program provides funds to be used for tuition and fees. Once the award is made, the funds are transferred directly to the student's account at VCU. In the event the student has received additional financial aid from other sources, depending on the stipulations placed on such awards and whether tuition has been paid in full, the amount of the graduate tuition assistance may have to be adjusted.

Applicants to the **School of Education Alumni Board Scholarship** must be enrolled in an undergraduate or graduate program in the School of Education. This scholarship varies in amount and will be awarded on both potential academic contributions to the field of education and on financial need.

Applicants to the **School of Education Faculty Organization Scholarship** must be enrolled in an undergraduate or graduate program in the School of Education, plan to enroll in a minimum of six hours per

semester during the year of the award and demonstrate potential to be competent professionals in their intended field. The applicants also must demonstrate financial need.

The **Schumacher Fund for Dissertation Research** was established by Dr. Sally A. Schumacher, the first full-time faculty member in educational research and evaluation, in memory of her parents, Professor F.X. Schumacher and Mrs. M.M. Schumacher. It provides financial assistance to doctoral students in the School of Education who are undertaking dissertations.

The **Departments of Special Education and Disability Policy and Teaching and Learning Scholarship** was established by faculty for an academically talented major pursuing a teaching career working with children and youth who come from traditionally underserved populations or who demonstrates a commitment to teaching students who present special challenges. Applicants must plan to take a minimum of six credit hours each semester during the period of the award and have a minimum grade point average of 3.0.

The **Gaynelle Whitlock Scholarship** honors Dr. Gaynelle Whitlock, a former associate dean of the school. It will provide financial assistance for graduate students in the counselor education program. Preference is given to individuals preparing to become elementary school counselors in the commonwealth of Virginia.

The **John Van de Walle Scholarship** was established by Dr. John Van de Walle, retired mathematics education professor, during the spring of 2002. Applicants must be students enrolled in the Master of Education program in curriculum and instruction with a concentration in mathematics.

The **Willie W. Whitlock Merit Scholarship** was established by Mr. Willie W. Whitlock Esq. (B.S. 1950) as a merit scholarship in education to honor his sister Dr. Gaynelle Whitlock, a faculty member and former associate dean in the School of Education.

The **MERC Research Fellowship Awards** are designed to prepare individuals for leadership and research positions at the school, division, state and federal levels and/or teaching, research and consulting positions in higher education. MERC Fellows support the work of the Metropolitan Educational Research Consortium (MERC), which is composed of VCU and regional metropolitan school divisions.

## Licensure

### Licensure for education personnel

Licensure and endorsement are based in part on the successful completion of an approved program developed in response to nationally recognized standards. All licensure and endorsement programs offered by the School of Education are approved by the Virginia Department of Education and the National Council for the Accreditation of Teacher Education. The commonwealth of Virginia is a member of the National Association of State Directors of Teacher Education and Certification, which has a national reciprocity agreement for teacher licensure. Therefore, all licensure and endorsement programs in the School of Education have approved program status and are a part of the NASDTEC Certification Reciprocity Agreement. Information about VCU students' performance on the state-mandated licensure tests (Praxis I Reading, Writing and Mathematics, Praxis II Specialty Area Tests, and other required assessments) is available on the School of Education Web site: [www.soe.vcu.edu/ssc](http://www.soe.vcu.edu/ssc).

### Graduate programs leading to initial teacher licensure

Individuals often decide to pursue a teaching career after they have

completed a baccalaureate degree. VCU serves qualified individuals through approved programs leading to a Master of Teaching, Master of Education (special education) or a Postbaccalaureate Certificate in Secondary Teaching. Upon completion of a degree program, graduates are eligible for both Virginia licensure and/or endorsement in the specific degree area.

Students seeking initial licensure in Virginia must have earned a liberal arts degree (or its equivalent) and pursue professional studies focusing on a specific area of preparation or licensure. Those without initial licensure who enter a program should expect to take some additional course work prior to the awarding of a degree.

Individuals seeking initial licensure to teach must pass the Virginia Board of Education licensure examinations. Admission to teacher preparation and clinical experiences requires that candidates meet or exceed the Virginia scores for Praxis I. Prior to licensure, candidates must pass the Praxis II specialty test in their respective disciplines. Candidates in early/elementary, special education (emotional disturbance, learning disabilities and mental retardation) and reading must pass the Virginia Reading Assessment. Effective Jan. 1, 2007, all teacher preparation candidates must take and pass the Virginia Communication and Literacy Assessment. For more information, refer to the School of Education Web site at [www.soe.vcu.edu/ssc](http://www.soe.vcu.edu/ssc).

Those planning to teach at the secondary level must possess a major or its equivalent in the discipline in which they wish to teach and for which VCU offers the approved program teaching specialty.

Individuals who wish to obtain licensure in art education, music education or theater education should consult the School of the Arts section of this bulletin.

The Master of Teaching program integrates undergraduate course work for a bachelor's degree in a liberal arts or science major with course work and graduate study leading to a Master of Teaching in a program area.

## Programs

The School of Education offers degree programs leading to the following:

### Master of Teaching

early childhood/elementary education  
middle education  
secondary education  
    English  
    foreign languages  
        French  
        German  
        Spanish  
history  
history and social studies  
mathematics  
sciences  
    biology  
    chemistry  
    interdisciplinary science  
    physics  
educational leadership  
    administration and supervision  
    leadership studies  
special education  
    dual endorsement in emotional disturbance and mental retardation,  
    emotional disturbance and learning disabilities, or learning  
    disabilities and mental retardation

### Master of Education

adult learning

counselor education  
    school counseling PK-12  
curriculum and instruction  
early education  
instructional technology  
middle education  
secondary education  
    English  
    foreign languages  
        French  
        German  
        Spanish  
mathematics  
sciences  
    biology  
    chemistry  
    interdisciplinary science  
    physics  
educational leadership  
    administration and supervision  
    leadership studies  
reading  
special education  
    early childhood special education  
    emotional disturbance  
    learning disabilities  
    mental retardation  
    severe disabilities

### Master of Science

health and movement sciences  
recreation, parks and sport leadership

### Ph.D. in Education

adult education and human resource development  
educational leadership  
instructional leadership  
research and evaluation  
special education and disability leadership  
urban services leadership

### Ph.D. in Rehabilitation and Movement Science

cardiopulmonary track  
neuromusculoskeletal dynamics track

### Post-baccalaureate certificates

instructional technology  
teaching  
    secondary education  
        English  
        foreign languages  
            French  
            German  
            Spanish  
history/social studies  
mathematics  
sciences  
    biology  
    chemistry  
    interdisciplinary science  
    physics

### Post-master's certificates

educational leadership  
reading specialist

### Extended Teacher Preparation Program

Any undergraduate student admitted to the university who declares a major in the College of Humanities and Sciences is also eligible to designate a specialization in early, middle, secondary or special education. Once the student has completed 90 credit hours, he or she applies to the Graduate School to begin graduate study in the School of Education. Upon successful completion of the program, the student receives a baccalaureate degree and a Master of Teaching degree. See the Department of Teaching and Learning and the Department of Special Education and Disability Policy sections in this bulletin for program details.

### Transfer credit

A maximum of six credit hours of acceptable graduate credit may be transferred into a graduate degree program. Course work taken prior to being admitted to a program in the School of Education and not applied to another degree may be applied for transfer. This includes course work taken at VCU.

Course work submitted for transfer is evaluated by the student's adviser and the department head. See the Ph.D. in Education program section of this bulletin for information regarding transfer credit for this program.

As a general rule, continuing education courses taken at institutions other than VCU will not be transferred.

Students seeking to earn credit at other institutions after acceptance to a graduate program in the School of Education must receive prior approval from their advisers and the department chair, or the director for the Ph.D. program. See the Graduate School section of this bulletin for further information regarding transfer credit.

## Education, Doctor of Philosophy (Ph.D.)

### Admission requirements summary

#### Education, Doctor of Philosophy (Ph.D.)

Indicate specialization:

The Ph.D. in Education Program is interdisciplinary in curriculum, design and management and serves a variety of special audiences. The program is organized into the following tracks.

- Adult education and human resource development track
- Educational leadership track
- Instructional leadership track
- Research and evaluation track
- Special education and disability leadership track
- Urban services leadership track

### Administration

#### John A. Rossi

Program Director

#### Teresa J. Carter

Track Coordinator, Adult Education and Human Resource Development

#### Richard S. Vacca

Track Coordinator, Educational Leadership

#### Doris A. White

Track Coordinator, Instructional Leadership

#### James H. McMillan

Track Coordinator, Research and Evaluation

#### John J. Kregel

Track Coordinator, Special Education and Disability Policy Leadership

#### Michael D. Davis

Track Coordinator, Urban Services Leadership

### Admission requirements

Applicants must have earned a master's degree in an appropriate profession or discipline related to a specific curriculum track in this program. Preference will be given to applicants who occupy positions of organizational leadership and have responsibility (or demonstrate potential) for planning, administering, conducting and evaluating service programs.

The entrance requirements, described in the admission packet and entrance requirements section that follows, reflect the aims of the program to provide continued academic growth for practitioners. The entrance requirements consist of a series of indicators that serve to predict an applicant's potential for successfully completing doctoral work. No indicator stands alone, and the program takes into account many facets beyond those traditionally considered. The program's philosophy is one of seeking excellence through an admission process that realizes that many applicants are practicing professionals whose experience and achievements must be recognized.

Admission is highly competitive. Preference is given to qualified applicants who demonstrate serious purpose, scholastic excellence, superior preparation and appropriate experience for the program.

#### Application process

Admission decisions rest with a faculty admissions committee and are made only on the basis of a complete application packet. There is one admission period each year. To begin course work in the summer session or fall semester, the application packet must be completed by Jan. 15. It is possible to delay enrollment, but application packets will be reviewed only during the January admission period.

The Admissions Committee reviews all completed admission packets. After the initial review of the packets, applicants are interviewed by the appropriate faculty. Applicants also must provide a writing sample on a date scheduled by the Admissions Committee. After the interviews and writing samples are completed and evaluated, all applicants are notified by mail of the admission decision. An applicant usually will have attained a cumulative GPA of at least 3.4 on all graduate work attempted and above average scores on the Aptitude Section of the GRE. However, no one variable automatically determines an admission decision.

### Admission packet and entrance requirements

Applicants for admission to the program must complete an admission packet, which includes the VCU Application for Graduate Study as well as supplementary essay materials. Admission packets are available from:

Graduate School  
Virginia Commonwealth University  
1001 Grove Ave.  
Richmond, VA 23284-3051

(804) 828-6916  
<http://www.vcu.edu/graduate>

Office of Doctoral Studies  
 Virginia Commonwealth University  
 P.O. Box 842020  
 Richmond, VA 23284-2020  
 (804) 827-2657  
<http://www.soe.vcu.edu>

The entrance requirements fall into the three following categories:

#### Academic criteria

- A completed VCU Graduate School Application form.
- Two official and up-to-date copies of all transcripts of the applicant's undergraduate and graduate record indicating that the applicant has earned a master's degree from an accredited college or university.
- Official and current scores (within the past five years) for the General Test of the GRE. Advanced test scores are not required but may be submitted. If applicants have taken the GRE more than five years prior to the year of expected admission, they must retake the examination. Older scores also may be submitted. The Admissions Committee will consider the time elapsed since last formal schooling, occupational success and leadership ability.

#### External criteria

- A professional resume indicating an applicant's educational and career experience as well as evidence of leadership potential. This experience may come from professional, civic, religious, fraternal or advocacy organizations. The applicant must present evidence of sustained experience in planning, leading, administering or evaluating programs and personnel in varied positions that are related directly to a program track. The evidence might include dates of positions, job responsibilities, supervisor's evaluations, publications and important knowledge that came from the position. Other appropriate evidence may include letters of recognition, awards and professional memberships.
- Completed forms from three references. The applicant must submit names, addresses and telephone numbers of three persons qualified and willing to rate the applicant's intellectual and leadership ability. If the applicant has attended school within the last three years, at least one of the references should be academic. Each of these persons completes a form rating the applicant in a number of personal and academic areas. Submission of these names constitutes permission to contact these persons by telephone anytime during the admission decision process.

In addition to these three names, the applicant should submit the name, address and telephone number of his or her current job supervisor. This person may be contacted by a

representative of the Admissions Committee and informed of the full scope and requirements of the doctoral program. The supervisor is expected to support the applicant's educational goals and be willing to provide release time for externship and other program-related activities.

#### Self-expression

The applicant must submit a single statement in which he or she describes: (1) his or her work experience; (2) personal career goals and how they have emerged from his or her work experience; (3) the manner in which the doctoral program will enhance his or her career goals; and (4) what he or she might contribute to the program.

The applicant is encouraged to check, in advance of the deadline date, the status of his or her application packet to ensure that all components are in the packet by the deadline. Inquiries should be made to the Office of Doctoral Studies. Incomplete packets will not be reviewed by the Admissions Committee.

#### Delayed admission

Anyone admitted for a particular year may request a delay of one year for entrance to the program. Normally this request will be granted. Individuals requiring a further delay will be required to reapply for admission. The request for delayed admission must be transmitted in writing to the director of the Office of Doctoral Studies and must state the reasons for the request and the date that the individual plans to begin the program.

#### Transfer credit

Ph.D. in Education program students may transfer up to nine credit hours into the program, including courses taken at VCU prior to being admitted to the program. Note that credits earned for one degree cannot be applied to another degree. The rules for transferring credit to this program are:

- Transfer credit requests will be considered only after the student has been awarded continuing doctoral status.
- There are no substitutes for the foundation courses, externship or dissertation.
- Each request for transfer credit must stipulate the program component to which it applies with attendant reasoning. Requests for transfer and substitution for a specific research or concentration course must include course syllabus, reading list, instructor's name and any other pertinent material. Each request for transfer credit must be approved by the program director and must be judged appropriate for the development of the student's concentration or cognate area.
- To be valid for application to the program, transfer credit must have been taken no more than seven years prior to completion of all program requirements for awarding the degree, including successful defense of the dissertation.

Students wishing exceptions to these transfer rules must petition the program director through their advisers. Their recommendations may be reviewed by the Ph.D. in Education Policy Board for final action.

See the [Graduate Studies at VCU](#) section of this bulletin for further policies governing transfer credit.



## Curriculum

There are six components of the program leading to the Doctor of Philosophy in Education:

- **Foundations component** (nine hours minimum). This component emphasizes theoretical and social issues in urban institutional development and changes that all leaders in urban service institutions must understand and respond to within their leadership positions.
- **Research component** (12 hours minimum). This component emphasizes the prerequisite skills essential to designing, conducting and interpreting research. It also provides the research, statistical and computer tools and resources necessary to produce research beneficial to the urban leader.

An applicant's level of research competence is considered prior to admission. Research-related prerequisites and/or corequisites may be established for individuals based on past academic and/or work experience.

- **Concentration component** (15 hours minimum). This component is designed to allow the student to pursue a series of courses that provide a specific focus and serve as the student's primary discipline. These courses are expected to develop the in-depth knowledge and skills in an identifiable area that is congruent with the student's current or projected career field. It is at this point in the program that the student pursues study in one of the following tracks:
  - adult education and human resource development
  - educational leadership
  - instructional leadership
  - research and evaluation
  - special education and disability policy leadership
  - urban services leadership
- **Cognate component** (nine hours minimum). This component is designed to allow the student to pursue, through course work outside the primary discipline, a secondary field of study that complements the student's concentration component.
- **Externship component** (three hours minimum). The semester externship refers to a minimum of 120 hours of work experience, 90 hours of which must be completed on-site, designed to enhance the student's program, career goals and professional development. The externship site is outside the setting in which the student is employed currently and ideally in a different, but related, career area in which the student has had no or limited prior work experience. It is expected that the student will develop an appreciation for the network of service delivery systems in the urban setting and acquire additional leadership skills to function more effectively within that network.
 

Externships are developed jointly by the student and the student's adviser and approved by the program director. Students may begin the externship experience only after being awarded continuing doctoral status. The required 120 clock hours of the externship may be extended over two consecutive semesters, if appropriate.
- **Dissertation component** (nine hours minimum). This component consists of EDUS 890 Dissertation Seminar, three hours, and EDUS

899 Dissertation Research, six hours. EDUS 890 Dissertation Seminar is designed to aid the student in identifying the resources and refining the skills required to initiate, develop and complete a scholarly prospectus and dissertation. The remaining credit hours of EDUS 899 Dissertation Research are assigned to the scholarly pursuit and completion of the dissertation.

- **Restricted elective** (three hours minimum). To be taken in either the concentration, cognate, or dissertation component.

<b>Foundation component</b>	credits
EDUS 701 Urban Education	9
PHIL 713/PPAD 713 Ethics and Public Policy or PHIL 635 Philosophy of the Social Sciences	
EDUS 795 Advanced Seminar in Education Issues	
SOCY 650 Theories of Social and Institutional Change	
<b>Research component</b>	12
EDUS 710 Educational Research Design	
EDUS 711 Qualitative Methods and Analysis	
STAT/SOCY 608 Statistics for Social Research	
Three credit selective	
<b>Concentration component</b>	15
<b>Cognate component</b>	9
<b>Externship component</b>	3
<b>Dissertation component</b>	9
EDUS 890 Dissertation Seminar	
EDUS 899 Dissertation Research	
<b>Restricted elective</b>	3
	<hr/>
	60

## Other Ph.D. in Education program requirements

### Residency requirement

Ph.D. in Education students are required to complete a minimum of 12 credit hours each calendar year, commencing with the first semester in which the student enrolls for course work.

### Continuing doctoral status

At the completion of 15 credit hours (excluding prerequisite courses), Ph.D. in Education students are evaluated for continuing doctoral status by the program director. To attain continuing doctoral status, the student must have attained a minimum cumulative GPA of 3.3.

### Program planning

Ph.D. in Education students are required to submit a final plan of program study before the completion of the 27th credit hour of study.

### Comprehensive examination

Ph.D. in Education students are required to pass a comprehensive



examination at the completion of all course work (excluding the dissertation component). The examination is scheduled once each semester over a two-day period.

## Adult education and human resource development track

### Admission requirements summary

#### Adult education and human resource development track

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	admissions suspended until further notice		GRE

#### Special requirements:

Personal interview and writing sample required.

Work experience and goals statement, professional vitae/resume, and current supervisor's contact information.

Designed primarily for personnel who will be responsible for the design and management of adult education and training functions in environments such as business and industry, county, state and federal agencies, and volunteer organizations. Emphasis is placed on leadership training for planning, developing, managing and evaluating training in adult and continuing education programs. This program of study is highly individualized and is based on the student's professional goals, previous graduate courses and work experiences.

#### Curriculum

Students admitted to the adult education and training track without prior course work in adult education may be required to take one or two prerequisite courses: ADLT 601 The Adult Learner and ADLT 603 Instructional Strategies for Adults.

#### Concentration component

credits  
15

#### Adult education and human resource development track

(select five of the following courses)

ADLT 700 Technologically Mediated Adult Learning Systems  
ADLT 701 Advanced Program Planning in Adult Education and Human Resource Development  
ADLT 702 Seminar in Adult Learning Theories  
ADLT 703 The Adult Education and Human Resource Development Training Consultant  
ADLT 704 Groups, Teams and Organizational Learning  
ADLT 705 Global Human Resource Development

#### Cognate component

9

#### Adult education and human resource development track

The concentration and cognate components combined must include nine hours outside the School of Education exclusive of Foundations and Research components.

### Educational leadership track

### Admission requirements summary

#### Educational leadership track

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Summer and fall	Jan 15	GRE

#### Special requirements:

Personal interview and writing sample required.

Work experience and goals statement, professional vitae/resume, and current supervisor's contact information.

Designed primarily for line administrative personnel in public school units. Emphasis is placed on providing leadership training for superintendents, building principals and assistant principals.

#### Curriculum

#### Concentration component

credits  
15

#### Educational leadership track

(recommended sequence)

TEDU 617 Instructional Models  
ADMS 701 Development and Implementation of Administrative Policies in Education  
ADMS 704 School Business Administration  
ADMS 705 Planning Educational Facilities  
ADMS 707 Advanced Educational Law

#### Cognate component

9

#### Educational leadership track

The concentration and cognate components combined must include at least nine credit hours outside of the School of Education.

### Instructional leadership track

### Admission requirements summary

#### Instructional leadership track

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Summer and fall	Jan 15	GRE

#### Special requirements:

Personal interview and writing sample required.

Work experience and goals statement, professional vitae/resume, and current supervisor's contact information.

Designed primarily for staff administrative personnel in urban school units. Emphasis is placed on providing leadership training for curriculum specialty coordinators and elementary, secondary and post-secondary school department heads and supervisors.

#### Curriculum

#### Concentration component

credits  
15

#### Instructional leadership track

(required sequence)

TEDU 617 Instructional Models  
ADMS 701 Development and Implementation of Administrative Policies in Education  
TEDU 730 Educational Staff Development  
TEDU 731 Instructional Theories and Strategies  
Elective

**Cognate component**

9

**Instructional leadership track**

The cognate component must be developed outside of the School of Education.

**Research and evaluation track****Admission requirements summary****Research and evaluation track**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Summer and fall	Jan 15	GRE

**Special requirements:**

Personal interview and writing sample required.

Work experience and goals statement, professional vitae/resume, and current supervisor's contact information.

Designed primarily for individuals with responsibility for conducting research and evaluation projects in and for agencies and educational organizations, emphasis in this track is placed on developing proficiency in both quantitative and qualitative methods of inquiry, providing students with a breadth of methods to study varied educational and social research questions. Students may select a concentration in either research or evaluation.

**Curriculum****Concentration component**credits  
15**Research and evaluation track**

(select five courses from the appropriate concentration)

**Research concentration**

SOCY 623 Causal Analysis  
SOCY 605/PADM 605 Survey  
Research Methods  
EDUS 790 Seminar in Educational  
Research and Evaluation  
NURS 772 Advanced Qualitative  
Research Methods  
MGMT 643 Applied Multivariate  
Methods  
PPAD 721 Survey of Applied  
Research Methods in Public Policy  
and Administration  
PPAD 711 Seminar in Public Policy  
and Administration

**Evaluation concentration**

EDUS 661 Educational Evaluation:  
Models and Designs  
EDUS 662 Educational Measurement  
and Evaluation  
EDUS 790 Seminar in Educational  
Research and Evaluation  
PPAD 627 Workshop in Policy  
Analysis and Evaluation  
SOCY 605/PADM 605 Survey  
Research Methods

**Cognate component**

9

**Research and evaluation track**

Students who choose the research concentration are required to complete an evaluation cognate. Students who choose the evaluation concentration must complete a research cognate. The concentration and cognate components combined must include at least nine credit hours outside of the School of Education.

**Special education and disability policy leadership track****Admission requirements summary****Special education and disability policy leadership track**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Summer and fall	Jan 15	GRE

**Special requirements:**

Personal interview and writing sample required.

Work experience and goals statement, professional vitae/resume, and current supervisor's contact information.

Designed primarily for individuals employed in leadership positions in the field of special education, emphasis in this track is placed on developing in-depth knowledge about topics as they pertain to personnel development, research, issues and policies in special education.

**Curriculum****Concentration component**credits  
15**Special education and disability policy track**

(required sequence)

TEDU 705 Seminar on Disability Policy  
TEDU 706 Personnel Development in Special Education  
TEDU 707 Critical Issues in Special Education  
TEDU 708 Designing, Funding and Conducting Research in Special  
Education  
TEDU 709 Directed Readings in Special Education

**Cognate component**

9

**Special education and disability policy track**

The cognate component must be developed outside of the school of education.

**Urban services leadership track****Admission requirements summary****Urban services leadership track**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Summer and fall	Jan 15	GRE

**Special requirements:**

Personal interview and writing sample required.

Work experience and goals statement, professional vitae/resume, and current supervisor's contact information.

Designed primarily for persons employed in leadership positions in the urban community requiring less traditionally delineated academic preparation, emphasis in this track is placed on providing leadership training for administrators of community agencies and community organizations.

**Curriculum**

<b>Concentration component</b>	credits 15
<b>Urban services leadership track</b> Courses in career-relevant skills within an urban context with approval of adviser.	
<b>Cognate component</b>	9
<b>Urban services leadership track</b> Either the concentration component or the cognate component, but not both, must be developed in the School of Education.	

## Educational Leadership, Certificate in (Post-master's certificate)

**Admission requirements summary****Educational Leadership, Certificate in (Post-master's certificate)**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Certificate	Fall Spring Summer	Mar 15 Nov 1 Mar 15	GRE or MAT

The post-master's certificate is a 21-hour program for individuals who hold a masters degree in education.

Individuals already having a master's degree in the field of education and seeking certification in educational leadership must take seven of the nine courses required (including ADMS 672) for the M.Ed. in Educational Leadership, administration and supervision track.

Individuals must meet Technology Standards approved by the Virginia Board of Education, and they must supply proof of Child Abuse and Neglect Recognition Training. Individuals successfully completing the program are eligible for the endorsement as a principal/supervisor K-12.

**Required courses, 21 credits****(select seven, including ADMS 672)**

ADMS 600 Public School Administration  
ADMS 601 Processes of Instructional Leadership  
ADMS 610 School and Community Relations  
ADMS 611 School Law  
ADMS 620 Improving School Programs and Performance  
ADMS 632 Administration and Supervision of Special Education  
ADMS 640 Human Resource and Fiscal Management  
ADMS 672 Principalship Seminar and Internship  
EDUS 660 Research Methods in Education

**Assessment, no credit**

Individuals must take the School Leader's Licensure Assessment or any other assessment required by the Virginia Board of Education for endorsement as a school principal/supervisor K-12.

## Instructional Technology, Certificate in (Post-baccalaureate graduate certificate)

**Admission requirements summary****Instructional Technology, Certificate in (Post-baccalaureate graduate certificate)**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Certificate	Fall Spring Summer	Mar 15 Nov 1 Mar 15	GRE or MAT

The Post-baccalaureate Certificate for Instructional Technology prepares educators to use technology effectively in their schools and to provide instructional leadership and technical support to other educators who use computer technology. Designed for teachers, resource persons and administrators at all grade levels (K-12), the sequence in instructional technology offers a unique opportunity to develop comprehensive knowledge and experience in the educational applications of computers and related technologies. The primary purpose of this certificate program is to meet the growing need for highly qualified core curriculum teachers, instructional technology support teachers and associated administrative personnel. The program requires six three-credit hour courses. In addition, prerequisites for the program require that students must be licensed K-12 teachers or administrators with a minimum of two years of classroom experience, who have completed TEDU 507 or provide evidence of mastery level of the requirements of that class. The program is committed to providing access to technology so that hands-on experience is offered in every class and participants produce instructional material that can be immediately integrated into the classroom.

**Curriculum**

	credits
TEDU 560 Instructional Strategies Using the Internet	3
TEDU 556 Advanced Computer Applications in Education	3
TEDU 610 Developing and Critiquing Visual Literacy	3
TEDU 620/MASC 681 Video Applications in Instruction	3
TEDU 640 Designing and Managing eLearning	3
TEDU 673 Technology Leadership and Staff Development	3
<b>Total</b>	<b>18</b>

## Reading Specialist, Certificate in (Post-master's certificate)

**Admission requirements summary****Reading Specialist, Certificate in (Post-master's certificate)**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Certificate	Fall Spring Summer	Mar 15 Nov 1 Mar 15	GRE or MAT

The certificate program is offered for individuals who aspire to become reading specialists. Applicants for the certificate program must hold a master's degree in any specialty area related to education.

The certificate program is designed for students who wish to gain state licensure as a reading specialist in kindergarten through high school settings. Applicants are required to have at least three years of teaching experience in a reading-related field setting if they want to be recommended to the Department of Education for endorsement as a reading specialist in Virginia.

All requirements for admission to graduate school apply to applicants for the Post-master's Certificate for Reading Specialist. All state department requirements for reading specialist (specifically the 12 hours of graduate or undergraduate work in selected areas) must be met.

Students are required to earn a minimum of 21 graduate hours beyond their current master's degree, including the required reading courses and an approved reading selective. Advisers will recommend selective courses based upon student experience and goals. During the last semester of course work, students must complete a reading portfolio documenting their work in the program and related work experiences. See adviser for specific due date.

Persons completing the program are expected to demonstrate:

- an understanding of the reading language learning process,
- the ability to critique, adapt and model use of a variety of reading instructional strategies, methods and programs,
- expertise in developing and providing for continuous assessment of an individual and groups,
- ability to implement school-wide developmental, creative and intervention reading/language arts programs, and
- ability to understand and apply theory to practice within a variety of cultural contexts.

credits

READ 600 Analysis and Correction of Reading Problems	3
READ 605 Organizing and Implementing Reading Programs	3
TEDU 561 Reading Foundations: Sociological/Psychological Perspectives	3
TEDU 562 Reading Instruction in the Content Areas	3
TEDU 672 Internship in Reading	3
READ 700 Externship	3
Approved literacy selective (select one of the following)	3
TEDU 525 Teaching Language Arts (3)	
TEDU 528/ENGL 528 Children's Literature II (3)	
TEDU 549 Diagnostic Reading in the Secondary School (3)	
TEDU 552/ENGL 552 Teaching English as a Second Language (3)	
READ 602 Teaching Reading to Adults (3)	
READ 601 Psycholinguistics and the Language Arts Curriculum (3)	
TEDU 681 Investigations and Trends in Teaching and	
ENGL 651 Topics in Teaching Composition: Capital Writing Project (6)	
TEDU 500 Workshops in Education: Topics in Literacy (to be designated) (3)	

Electives should be used to ensure state regulations for the endorsement are met.

### Added or add-on endorsements Teaching English as a Second Language

This program leads to an added endorsement, meaning an individual must

already be licensed to teach in one or more areas of elementary, middle, secondary, special education or be certified in another teaching area.

<b>Foreign language</b>	credits 12 plus
<b>Linguistics</b> (choose two)	6
ENGL/LING 449 Introduction to Linguistics	
ENGL/LING 450 Modern Grammar	
ENGL/LING 451 History of the English Language	
ENGL/LING 452 Language and Gender	
ENGL/LING 453 Studies in Linguistics	
ENGL/LING 454 Cross-cultural Communication	
<b>Applied Linguistics</b>	3
ENED/ENGL 532 Applied Linguistics	
SPAN/LANG 316 Spanish Linguistics	
<b>Teaching</b>	6
ENGL/TEDU 552 Teaching English as a Second Language	
Choose one from:	
TEDU 562 Teaching Reading in the Content Areas	
TEDU 561 Reading Foundations	
READ 602 Teaching Reading to Adults	

### Add-on endorsements in grades 6 through 12, science

Add-on endorsements in science are available in biology, chemistry, earth science and physics. Each add-on requires a first endorsement in one science and at least 18 semester hours in the add-on science that includes preparation in specified areas. The earth science added endorsement is listed below. For information about the added endorsements in biology, chemistry or physics, contact the Department of Teaching and Learning.

### Earth science

To add an earth science endorsement to an endorsement in another science discipline, the individual must earn at least 18 semester hours in the earth sciences, including preparation in geology, oceanography, meteorology and astronomy. Courses to meet these requirements include:

GEOG/ENVS 105 and 105L Physical Geology  
 GEOG/ENVS 335 and 335L Environmental Geology  
 GEOG/ENVS 411 Oceanography  
 GEOG/ENVS 401 Meteorology and Climatology  
 PHYS 103 Astronomy  
 Elective courses to complete at least 18 hours include: GEOG 203 and 204 Physical Geography and PHYS 391 Fieldwork and Special Topics.

### Teaching, Certificate in (Post-baccalaureate graduate certificate)

#### Admission requirements summary

#### Teaching, Certificate in (Post-baccalaureate graduate certificate)

Indicate specialization: Secondary Education

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Certificate	Fall	Mar 15	GRE or MAT
	Spring	Nov 1	
	Summer	Mar 15	

The Postbaccalaureate Certificate in Teaching program is designed for

students who have earned bachelor's degrees in fields other than education, who wish to become teachers in secondary schools in one or more subjects and for whom a master's degree is not a priority (applicants already may have earned a master's degree or wish to earn a master's degree in a specialized area of education later). Applicants must have a major or its equivalent in the subject they wish to teach.

Students are required to complete a minimum of 24 hours beyond the bachelor's level, including the courses listed below. Equivalent courses taken within the past five years may transfer; however, a minimum of 24 credit hours, including clinical experiences, must be taken at VCU after admission to the program.

Persons completing the program are expected, among other attributes, to have an understanding of human development and learning theory appropriate to the age group they will teach, to demonstrate knowledge of the subjects they will teach, to develop an understanding of purposes for education and a defensible philosophical approach toward teaching, to acquire awareness of the diversity of the school-age population in cultural background and styles of learning, to demonstrate an ability to plan and implement effective teaching, and to measure student learning in ways that lead to sustained development and learning.

#### Secondary education, 6-12

##### Qualifying courses

EDUS 300 Foundations of Education (3)  
TEDU 310 Practicum (3)

credits  
6

##### Foundation courses

EDUS 602 Adolescent Growth and Development or  
EDUS 607/PSYC 607 Advanced Educational Psychology  
EDUS 673 Seminar on Education Issues, Ethics and Policy

6

##### Concentration courses

TEDU 537 Secondary School Curriculum  
Choose discipline for which certification sought  
TEDU 540 Teaching Middle and High School Sciences  
TEDU 543 Teaching Secondary School Foreign Languages  
TEDU 545 Teaching Secondary School Mathematics  
TEDU 547 Teaching Secondary School Social Studies  
TEDU 548 Teaching Secondary School English  
TEDU 681 Investigation and Trends in Teaching

9

##### Clinical experience

TEDU 672 Internship

9

30

## Department of Counselor Education

The Department of Counselor Education prepares counselors with the specialized knowledge and skills required for placement in elementary, middle and high schools in the commonwealth of Virginia and throughout the nation. Consistent with this approach are the program goals of graduating students who have knowledge of basic counseling theory and practice, possess competencies in essential counseling services, have the skills necessary to evaluate relevant research and are committed to evaluating their counseling interventions.

For additional information, consult the department's Web site at

[www.soe.vcu.edu/departments/councEd](http://www.soe.vcu.edu/departments/councEd).

### Administration

**Susan D. Leone**  
Department Chair

## Counselor Education, Master of Education (M.Ed.)

### Admission requirements summary

#### Counselor Education, Master of Education (M.Ed.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.Ed.	Fall	Mar 15	GRE or MAT
	Spring	Nov 1	
	Summer	Mar 15	

The M.Ed. In Counselor Education is a 48-credit-hour program designed primarily to prepare counselors for elementary, middle and high schools in the commonwealth of Virginia and the nation, and secondarily to prepare counselors for higher education and community agencies. The program leads to school counseling licensure and preparation for advanced graduate work at the post-master's level. While licensure as a teacher and teaching experience may be required for employment as a school counselor, applicants for the M.Ed. In Counselor Education program do not have to meet such criteria.

The faculty makes every effort to assist students in individualizing a graduate program to match their professional needs and interests. However, the mature student will recognize that individualization takes place in an environment of legitimate constraints revolving around institutional and license requirements. Faculty members view each program as more than simply an aggregate of courses, and students should plan all program work with their faculty advisers.

For students who already have a master's degree in education, the 33 credits of program core courses in guidance and counseling also will lead to recommendation for licensure as a school counselor. Students wishing this licensure must meet with the department chair and file a plan of study. Although students holding master's degrees do not apply for admission to the graduate program, they must file the appropriate plan of study in order to qualify for the VCU approved program of study. No course work taken more than seven years prior to applying for licensure as a school counselor will count toward meeting VCU's approved program course equivalents.

### Guidance and counseling

#### Foundations

credits  
9

#### Human development and learning

EDUS 605 Child and Adolescent Growth and Development

#### Cultural, historical and philosophical (one of the following)

EDUS 601 Philosophy of Education  
EDUS 608 History of Western Education  
EDUS 610 Social Foundations of Education  
EDUS 612 Education and the World's Future  
EDUS 614 Contemporary Educational Thought

EDUS 673 Seminar on Educational Issues, Ethics and Policy

#### Research

EDUS 660 Research Methods in Education

#### Program core

33

CLED 600 Introduction to Guidance  
 CLED 601 Theories of Counseling  
 CLED 602 Practicum: Techniques of Counseling  
 CLED 603 Group Procedures in Counseling  
 CLED 604 Practicum: Group Procedures in Counseling  
 CLED 605 Career Information and Exploration  
 CLED 606 Assessment Techniques for Counselors  
 CLED 610 Guidance in Elementary and Middle Schools  
 CLED 621 Secondary School Guidance Seminar  
 CLED 672 Internship: K-12 School Counseling (six credits)  
 600 clock hours of actual work in an appropriate setting.  
 Students wanting placement in elementary, middle or high schools may not fulfill this requirement during the summer.

#### Approved electives

6

48

## Department of Educational Leadership

The mission of the department is to prepare reflective instructional leaders for K-12 schools and for literacy programs and corporate training centers. Through course work and other experiences, the program aims to turn out leaders who are able to develop positive school cultures through the use of communications skills and by appropriation of fiscal, material and human resources.

The department offers programs that lead to the M.Ed., Post-master's Certificate and Ph.D. in Education with a track in educational leadership. Individuals who complete one of those programs may qualify for endorsement by the Virginia Department of Education as principal/supervisor. An optional track M.Ed. is offered for individuals in institutions of higher education and other settings who will benefit from the study of educational leadership but do not wish to seek positions as school administrators.

For more information consult the department's Web site at [www.soe.vcu.edu/departments/edled](http://www.soe.vcu.edu/departments/edled).

#### Administration

**Richard S. Vacca**  
 Department Chair

## Educational Leadership, Master of Education (M.Ed.)

### Admission requirements summary

#### Educational Leadership, Master of Education (M.Ed.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.Ed.	Fall	Mar 15	GRE or MAT
	Spring	Nov 1	
	Summer	Mar 15	

The M.Ed. in Educational Leadership offers two tracks. The administration

and supervision track is designed for individuals who aspire to positions as instructional leaders in schools. Those who hold positions of leadership in other educational institutions that don't require endorsement as a principal or supervisor may choose the leadership studies track.

### Administration and supervision track

### Admission requirements summary

#### Administration and supervision track

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.Ed.	Fall	Mar 15	GRE or MAT
	Spring	Nov 1	
	Summer	Mar 15	

The M.Ed. in Educational Leadership administration and supervision track is a 33-hour program that prepares individuals to fill positions as reflective leaders for schools. Applicants are expected to have at least two years of successful teaching experience. An end-of-program assessment is required. Individuals must meet the Technology Standards approved by the Virginia Board of Education, and they must supply proof of Child Abuse and Neglect Recognition Training. Individuals who successfully complete the program are eligible for endorsement as a principal/supervisor for grades K-12.

#### Required courses

ADMS 600 Public School Administration  
 ADMS 601 Processes of Instructional Leadership  
 ADMS 610 School and Community Relations  
 ADMS 611 School Law  
 ADMS 620 Improving School Programs and Performance  
 ADMS 632 Administration and Supervision of Special Education  
 ADMS 640 Human Resource and Fiscal Management  
 ADMS 672 Principalship Seminar and Internship  
 EDUS 660 Research Methods in Education

credits  
27

#### Electives: Select two, with approval of adviser

6

ADMS 605 Organizational Theory, Structure and Culture in Educational Settings  
 ADMS 606 Organizational Behavior and Change in Educational Settings  
 ADMS 641 School Personnel Administration  
 ADMS 651 Topics in Education: Innovative Instructional Strategies Using the Internet  
 EDUS 673 Seminar on Educational Issues, Ethics and Policy  
 STAT 508 Introduction to Social Statistics  
 TEDU 615 Curriculum Development

#### Total credits

33

#### Assessment (no credit)

Individuals must take the School Leader's Licensure Assessment or any other assessment required by the Virginia Board of Education for endorsement as a school principal/supervisor for grades K-12.

### Leadership studies track

### Admission requirements summary

#### Leadership studies track

Degree:	Semester(s)	Deadline	Test
	of entry:	dates:	requirements:
M.Ed.	Fall	Mar 15	GRE or MAT
	Spring	Nov 1	
	Summer	Mar 15	

The M.Ed. in Educational Leadership leadership studies track is a 30-hour program for individuals who hold or expect to hold leadership positions in educational organizations but who do not wish to obtain principal/supervisor endorsement from the Virginia Department of Education. The program includes 15 hours of credit in required courses and 15 hours in a concentrated series of electives chosen with approval of the students adviser.

#### Required courses

ADMS 600 Public School Administration  
ADMS 601 Processes of Instructional Leadership  
ADMS 611 School Law  
ADMS 620 Improving School Programs and Performance  
EDUS 660 Research Methods in Education or EDUS 673 Seminar on Educational Issues, Ethics and Policy

credits  
15

#### Elective courses

Any planned, concentrated series of courses from ADLT, ADMS, EDUS, PADM, TEDU designed by student or student group and adviser to meet needs of student or student group.

15

#### Total credits

30

## Department of Foundations of Education

The Department of Foundations of Education provides multidisciplinary, liberal education perspectives that undergird all programs in the school. Our contribution is based on the premise that the preparation of effective educational practitioners requires fundamental, deep understanding of the broader perspectives that are represented by research and theory in psychological, cultural, philosophical, historical and ethical areas of inquiry. As such, the department provides an essential link between practice and theory that makes effective reflection and decision making possible. By facilitating a rich contextual understanding of contemporary educational issues and practices, the department enhances the ability of educators to be reflective decision makers who make effective use of complex judgments and critical thinking. Our goal is to prepare educators for intelligent, responsible leadership in a variety of educational careers and settings for teaching, research, administration and policy-making.

The department plays an integral part in the Ph.D. in Education program by teaching required courses in urban education and research methods and other elective courses, by active participation on dissertation committees, and by directing the Research and Evaluation Track of the program. The department also has responsibility for the Metropolitan Educational Research Consortium (MERC), a partnership between VCU and seven Richmond area school divisions to conduct and disseminate action research.

For more information consult the department's Web site at [www.soe.vcu.edu/departments/fe](http://www.soe.vcu.edu/departments/fe).

#### Administration

**James H. McMillan**  
Department Chair

## Department of Health and Human Performance

Along with four undergraduate programs, the Department of Health and Human performance also offers a Master of Science in Health and Movement Sciences and Doctor of Philosophy in Rehabilitation and Movement Science.

The M.S. in Health and Movement Sciences program provides advanced course work for students interested in the application of health and movement science principles to exercise science, teaching and sports medicine. This program has a central focus on the sciences and is flexible enough so that students, with the assistance of an adviser, can design a program that truly meets their professional goals. The program also offers an excellent progression of study for students that teach in the health and physical education field. The department also offers an entry level athletic training option as part of the M.S. in Health and Movement Science program.

The Doctor of Philosophy in Rehabilitation and Movement Science program is interdisciplinary in nature and includes faculty from the departments of Exercise Science, Physical Therapy, and Physical Medicine and Rehabilitation. Students choose either a cardiopulmonary track or one in neuromusculoskeletal dynamics.

For more information, consult the department's Web site at [www.soe.vcu.edu/departments/hhp](http://www.soe.vcu.edu/departments/hhp).

## Health and Movement Sciences, Master of Science (M.S.)

### Admission requirements summary

#### Health and Movement Sciences, Master of Science (M.S.)

Degree:	Semester(s)	Deadline	Test
	of entry:	dates:	requirements:
M.S.	Fall	Mar 15	GRE or MAT
	Spring	Nov 1	
	Summer	Mar 15	

(Department of Exercise Science)

This program provides advanced course work for students interested in the application of health and movement science principles to exercise science, teaching and sports medicine. Applicants planning to enter the teaching profession should hold a valid teaching endorsement. Students typically admitted to this program have backgrounds in exercise science, life science or related fields. This program does not provide opportunities for initial licensure in health and physical education.

The Master of Science in Health and Movement Sciences program of study offers a thesis and non-thesis option. Both options require a minimum of 36 total graduate credit hours for completion of the degree program.

After completing at least 12 graduate credits and not more than 18 credits, with a minimum GPA of 3.0, all students must apply for advancement to candidacy. In the thesis option, students must complete HEMS 798 Thesis for six credit hours and 30 hours of prescribed course work. Students enrolling in this option will not be required to complete a comprehensive examination. In the non-thesis option, students must complete 36 hours of prescribed course work and must pass a comprehensive examination, which is taken after completing 30 hours of course work.

#### Research core

HEMS 600 Introduction to Research Design in HEMS and RPSP  
(3)  
HEMS 601 Movement Physiology (3)

credits  
15



HEMS 602 Statistical Application in HEMS and RPSL (3) or BIOS  
543 Statistical Methods I (3)  
HEMS 604 Nutrition for Health and Physical Activity (3)  
HEMS 605 Psychology of Physical Activity (3)

<b>Thesis option</b>	6
HEMS 798 Thesis (6)	
<b>Specialty</b> (select course work with consultation of adviser)	9-15
HEMS 500 Motor Development of Young Children (3)	
HEMS 505 Contemporary Issues in Health (3)	
HEMS 521 Pathomechanics of Sports Injuries (3)	
HEMS 550 Exercise, Nutrition and Weight Management (3)	
HEMS 606 Psychosocial Aspects of Sport (3)	
HEMS 610 Laboratory Techniques in Movement Science (3)	
HEMS 611 Biomechanics of Human Motion (3)	
HEMS 613 General Motor Ability Evaluation (3)	
HEMS 614 Motor Assessment for Special Populations (3)	
HEMS 615 Orthopaedics and Therapeutics in Sports Medicine (3)	
HEMS 620 Motor Learning and Performance (3)	
HEMS 660 Neuromuscular Performance (3)	
HEMS 700 Externship (1-6)	
HEMS 701 Clinical Exercise Physiology (3)	
HEMS 741 Directed Research Study (3)	
HEMS 751 Research Seminar in HEMS (1-3)	
<b>Suggested outside electives</b>	6
(develop electives in consultation with adviser)	
minimum	36

## Rehabilitation and Movement Science, Doctor of Philosophy (Ph.D.)

### Admission requirements summary

#### Rehabilitation and Movement Science, Doctor of Philosophy (Ph.D.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall preferred	Applications received prior to JanGRE 9 will be given priority consideration	

The Ph.D. in Rehabilitation and Movement Science is an interdisciplinary degree program developed through a collaborative partnership of the departments of Exercise Science, Physical Therapy, and Physical Medicine and Rehabilitation. The mission of this collaborative degree program is to prepare applied scientists capable of approaching multifaceted health care, preventive medicine and rehabilitation initiatives from an integrative rather than competitive perspective, and to prepare graduates to assume leadership positions in higher education teaching, research and management within rehabilitation and movement science.

There are two program tracks: cardiopulmonary and neuromusculoskeletal dynamics. The cardiopulmonary track prepares individuals to teach, conduct research and direct external funding initiatives in the area of cardiopulmonary rehabilitation and physiology, particularly in areas associated with metabolic and chronic disease states. The neuromusculoskeletal dynamics track prepares individuals for teaching, research and clinical initiatives associated with the identification and rehabilitation of movement disorders.

### Admission requirements

Admission decisions are made by an admissions committee comprised of faculty members from each of the major collaborating departments:

Exercise Science, Physical Therapy and Physical Medicine and Rehabilitation. Applicants must have completed at least one of the following: a master's degree in a related area, 30 hours of postbaccalaureate work (e.g. course work at 500 level or greater), or a first professional degree program. Admission decisions are made only on the basis of a completed application packet.

Applicants for admission to the program must complete an admission packet that includes the VCU Application for Graduate Study as well as supplementary program materials. Admission packets are available from:

#### Graduate School

Virginia Commonwealth University  
Moseley House  
P.O. Box 843051  
Richmond, VA 23284-3051  
(804) 828-6916  
<http://www.vcu.edu/graduate>

or

#### Office of Doctoral Studies

Virginia Commonwealth University  
P.O. Box 842020  
Richmond, VA 23284-2020  
(804) 827-2657  
<http://www.soe.vcu.edu>

The entrance requirements fall into the following three categories. All criteria must be completed for consideration for admission.

#### Academic criteria

- A completed VCU Graduate School Application.
- Two official and up-to-date copies of all transcripts of the applicant's undergraduate and graduate record indicating that the applicant has completed the minimum required prerequisite course work.
- Official and current scores (within the past five years) for the general test of the GRE. Older scores may be submitted and consideration will be based upon the time elapsed since last formal schooling, occupation success and research ability.
- Priority for admission will be given to the applicants who have attained at least 3.5 in all graduate work attempted and a combined verbal and quantitative score on the GRE of a minimum of 1,000. If the TOEFL is required, a minimum of 600 is expected (250 on the computer-based test).

#### External criteria

- A professional resume indicating an applicant's educational and career experience as well as evidence of research potential.
- Completed reference forms from three individuals capable of evaluating the applicant's academic and research potential.

#### Written expression

- A personal statement in which the applicant discusses his or her personal career goals and the manner in which this doctoral program would enhance those goals.

- A summary of motivation, education and aims in pursuing an interdisciplinary degree in rehabilitation and movement science.

Applicants being considered for admission must complete an interview with a Ph.D. admissions committee representative and/or research faculty member with whom the student would like to work.

The applicant is encouraged to check the status of his or her application packet to ensure that all components of the packet have been received. Inquiries should be made to the Office of Doctoral Studies. The Admissions Committee will not review incomplete packets.

## Transfer credit

Students in the program may transfer up to nine credit hours into the program, including courses taken at VCU prior to being admitted to the program. Note that credits earned for one degree cannot be applied to another degree.

## Curriculum

The Ph.D. in Rehabilitation and Movement Science will require a minimum of 36 credit hours of course work and 12 credit hours of dissertation research. Students will be required to complete:

- 12 credit hours of research core courses comprised of a research design class, two classes in statistical application and an elective in the area of research design or statistics;
- 18 credit hours in a concentration comprised of a focus on course work in a specific discipline formulated with the major adviser and approved by the Admissions Committee of the degree program;
- three credit hours comprised of laboratory rotations in a minimum of two laboratories within the Rehabilitation and Movement Science program; each credit hour requires a minimum of 50 contact hours in the laboratory selected;
- three credit hours of professional development comprised of an interdisciplinary research/journal club seminar (one credit hour), a teaching practicum (one credit hour) and a presentation delivered at a regional, national or international conference of a related discipline (one credit hour);
- 12 credit hours of dissertation research comprised of a focused line of research over a three-to-four-year period of doctoral work.

Required research courses for the program (nine credit hours) – both tracks:

	credits
STAT 543 Statistical Methods I	3
STAT 544 Statistical Methods II	3
ALHP 761 Health Related Sciences Research Design (or other approved course in research design)	3
Approved research design alternatives:	
HADM 761 Health Services Research Methods I	3
SOCY 602 Applications of Advanced Research Methods	3
EDUS 710 Educational Research Design	3

Elective research courses for the program (three credit hours) – both tracks:

	credits
BIOS 531 Clinical Epidemiology	3
BIOS 553-554 Applied Statistics	3

BIOS 571 Clinical Trials	3
BIOS 572 Statistical Analysis of Biomedical Data	3
BIOS 655 Quantitative Epidemiology	3
ALHP 716 Grant Writing and Project Management in Health Related Sciences (or elective research course in consultation with adviser)	3

Required concentration courses for the Ph.D. program tracks

	credits
<b>Cardiopulmonary track</b>	
PHIS 512 Cardiovascular Exercise Physiology	3
PHIS 604 Cell Physiology	4
PHIS 612 Cardiovascular Physiology	3
REMS/HEMS 601 Movement Physiology	3
REMS/HEMS 610 Laboratory Techniques in Rehabilitation and Movement Science	3
REMS/HEMS 675 Clinical Exercise Physiology	3
	19

## Neuromusculoskeletal dynamics track

(select 18 credits from the following):

REMS/HEMS 611 Biomechanics of Human Motion	3
REMS/HEMS 660 Neuromuscular Performance	3
REMS 665 Instrumentation in Motion Analysis	3
PHTY 602 Advanced Biomechanics	3
PHTY 605 Foundations of Pathokinesiology	3
PHTY 606 Therapeutic Kinesiology	3
PHTY 608 Advanced Musculoskeletal Sciences	3
REMS/HEMS 692 Independent Study or elective course	3

## Laboratory rotations (three credit hours) – both tracks:

REMS 710 Research Techniques in Rehabilitation and Movement Science	1-3
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## Professional development core (three credit hours) – both tracks

REMS 690 Research Seminar in Rehabilitation and Movement Science	1
REMS 793 Teaching Practicum in Higher Education	1
REMS 794 Research Presentation Seminar	1

## Research in rehabilitation and movement science (12 credit hours) – both tracks

REMS 798 Research in Rehabilitation and Movement Science	12
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## Advisory committee

### Adviser

Incoming students will identify a faculty member in the program with whom they would like to pursue their academic program and research endeavors. Every effort will be made to accommodate the student's first choice of a faculty adviser. If the student is unsure of a research interest and adviser selection, the Admissions Committee will assign an adviser. Within the first two semesters of attendance, a permanent adviser should be identified. The adviser, together with the student, will develop a plan of study for the student's didactic and scholarly program and will be responsible for guiding the student's academic progress such that the adviser will supervise the student's research work and dissertation preparation.

### Advisory committee

The student, in consultation with the adviser, will identify faculty members to serve on the advisory committee. The committee shall be appointed no later than the end of the spring semester following matriculation into the program. The student's advisory committee shall be comprised of five faculty members to include the adviser, two members from the

rehabilitation and movement science faculty and two faculty members from other related departments. The student's adviser, who is active in the field of research the student has selected, will chair the committee.

## Comprehensive examination

Once core courses are successfully completed, students must pass written and oral comprehensive examinations before transitioning to candidacy. These examinations will test students on their basic knowledge of rehabilitation and movement science principles (primarily in their chosen track) and research methods as obtained through core, research and elective courses of the curriculum. The student must demonstrate a firm grasp of the material and the potential to become an independent researcher.

The written exam will be given to students during their second spring semester in the program. The written exam will consist of an area paper pertinent to the student's area of interest. The student's adviser and advisory committee must approve the topic and an outline of the area paper. The student's adviser is responsible for grading the area paper. If a student receives a less than satisfactory grade on the area paper, he/she will be afforded the opportunity to make appropriate revisions. Students will only be allowed to revise the area paper once. The area paper should be a minimum of 15 double-spaced pages in 12-point font. The area paper must be in a form suitable for submission for publication to a journal whose content addresses topics consistent with the area paper. The student's adviser and advisory committee must approve the journal selection and manuscript prior to submission. A passing grade on the written exam is not contingent upon the manuscript being accepted for publication.

Following acceptance of the area paper, the student will write a research proposal. The structure of the proposal will follow federal grant submission guidelines such as those specified by the National Institutes of Health or the Centers for Disease Control. The analytical research proposal must be submitted to and approved by the student's advisory committee prior to the oral examination.

The oral exam should be conducted within three to six months of successful completion of the written exam with the goal of proceeding to candidacy by the end of the fall semester of the student's third year. The oral exam will be based on, but not primarily limited to, the student's proposed analytical research project. The student must receive a satisfactory grade from each committee member to pass the oral exam. The student may proceed to candidacy and begin the research outline in the proposal once successful completion of the oral examination is achieved.

## Exit requirements

### Dissertation defense

Upon completion of all required course work and the research project, the student must prepare a dissertation to describe the research. A dissertation manual is available for download from the VCU Web site. Students are highly encouraged to become familiar with this manual and use it as a guide for preparation of their dissertation. All committee members must approve the written dissertation and the student must orally defend this dissertation in a publicly advertised seminar prior to graduation.

Students are expected to meet all university graduate school requirements regarding minimal GPA and limitation on credits achieved with a grade of "C" or below.

## Time to degree

The doctoral degree must be obtained within seven years of matriculation.

It is expected that full-time students will satisfy all requirements within four to five years. Part-time students may take the full seven years to complete all courses and the research project.

## Department of Special Education and Disability Policy

The mission of the Department of Special Education and Disability Policy is to prepare skilled, effective professionals who can meet the educational needs of children and youth with disabilities and their families through graduate degree programs, discover new instructional and service delivery strategies through an ongoing program of research, and share information on these strategies to a wide audience through collaborative relationships with children and youth with disabilities, their families, educators, local, state and federal government agencies, and other professionals throughout the commonwealth and across the nation.

The department offers extended teacher preparation programs that allow students to prepare for professional roles as teachers of students with emotional disturbance, learning disabilities, or mental retardation. These five-year programs culminate in the simultaneous awarding of both a bachelor's degree from the College of Humanities and Sciences and a Master of Teaching degree from the School of Education.

At the graduate level, the department offers five Master of Education programs. Successful completion of one of the degree programs leads to endorsement in early childhood special education, emotional disturbance, learning disabilities, mental retardation or severe disabilities. In addition, the department offers a Ph.D. in Education with an emphasis on Special Education and Disability Policy.

For more information consult the department's Web site at [www.soe.vcu.edu/departments/sedp](http://www.soe.vcu.edu/departments/sedp).

## Administration

**John J. Kregel**  
Department Chair

## Special Education, Master of Education (M.Ed.)

### Admission requirements summary

#### Special Education, Master of Education (M.Ed.)

Indicate specialization:

The Master of Education in Special Education program prepares graduates for work in one of five areas: early childhood special education, emotional disturbance, learning disabilities, mental retardation or severe disabilities. Applicants who do not already hold a teaching license must meet both licensure and degree requirements prior to the awarding of the Master of Education degree unless exempted as a professional from another discipline. Students should plan carefully with their adviser to ensure that the appropriate courses and experiences are completed. Successful completion of the degree program leads to endorsement in early childhood special education, emotional disturbance, learning disabilities, mental retardation or severe disabilities.

### Early childhood special education

## Admission requirements summary

### Early childhood special education

Degree:	Semester(s)	Deadline	Test
	of entry:	dates:	requirements:
M.Ed.	Fall	Mar 15	GRE or MAT
	Spring	Nov 1	
	Summer	Mar 15	

The Master of Education in Special Education program with a track in early childhood special education is a sequentially planned series of courses and clinical experiences designed to prepare individuals to work with young children, from birth through age 5, with developmental disabilities and their families. Successful completion of the degree program qualifies students for teacher licensure with endorsement in early childhood special education by the Virginia Department of Education. Students are prepared to intervene with infants and young children representing a wide range of abilities, including those at risk for developmental delays and those at risk for severe disabilities. As a result of training, students will be prepared to fill a variety of early intervention roles. The program can be completed in five semesters of full-time study or six semesters of part-time study.

### Foundations 6-9

#### Human development and learning (3)

EDUS 603 Seminar in Child Growth and Development or equivalent (per program coordinator approval)

#### Cultural, historical and philosophical (3)

(one of the following)

EDUS 601 Philosophy of Education

EDUS 608 History of Western Education

EDUS 610 Social Foundations of Education

EDUS 612 Education and the World's Future

EDUS 614 Contemporary Educational Thought

EDUS 673 Seminar on Educational Issues, Ethics and Policy (3)

#### Research (3)

EDUS 660 Research Methods in Education

### Special education core 11

MNRT 500 Language/Communication Intervention for Young Children and Individuals with Severe Disabilities (3)

TEDU 542 Family/Professional Partnerships (2)

TEDU 630 Trends in Special Education (3)

TEDU 631 Behavior Management of Students with Disabilities (3)

### Early childhood track 21

ECSE 601 Assessment of Infants and Young Children with Disabilities (3)

ECSE 602 Instructional Programming for Infants and Young Children with Disabilities (3)

ECSE 603 Integrated Early Childhood Programs (3)

ECSE 604 Early Literacy and Augmentative Communication (3)

ECSE 641 Interdisciplinary Methods in Early Intervention (3)

ECSE 672 Internship in Early Development and Intervention (2)

ECSE 700 Externship (4)

### Electives 3

TEDU 524 Cross-cultural Perspectives in Child Rearing and Early Education

TEDU 622 Creative and Cognitive Development

IDDS 600 Interdisciplinary Studies in Developmental Disabilities: Teamwork in Serving Persons with Developmental Disabilities  
Other (with approval of adviser)

**Program total (without thesis) 41-44**

TEDU 798 Thesis (6)

**Program total (with thesis) 47-50**

## Emotional disturbance

## Admission requirements summary

### Emotional disturbance

Degree:	Semester(s)	Deadline	Test
	of entry:	dates:	requirements:
M.Ed.	Fall	Mar 15	GRE or MAT
	Spring	Nov 1	
	Summer	Mar 15	

The Master of Education in Special Education with a specialization in emotional disturbance provides teachers the professional knowledge and skills needed to work in a variety of settings: general education classrooms (where children with special needs are being included), resource rooms, self-contained classrooms and residential programs. In developing teacher competencies the master's program focuses on specific skills and strategies for diagnosing and remediating behavior and learning problems of students with emotional disturbance. The educational and therapeutic interventions taught in the program are based on a number of theoretical models including behavioral, psychodynamic, ecological and psychoeducational. An emphasis of the program is on collaboration with parents, with professionals from other disciplines, and with other community agencies and programs.

Program course work builds on a strong foundation of knowledge in psychology, child development, research and education. Students receive in-depth training in how to identify students with emotional disturbances, how to diagnose individual needs, and how to plan and deliver individualized programs in a team setting. Special training is provided in the teaching of reading, behavior management and the use of interactive strategies teaching positive social skills. Graduates are prepared to work with students in completing a variety of transitions, such as from special education to the general education classroom or from high school to employment and independent living.

The program offers a variety of placement opportunities for practicum and externship experiences, including a range of public and private schools and mental health programs in the Richmond area that allow graduate students to select field experiences that are consistent with their professional goals. Previous teaching experience is valued, but not required. Students without previous teaching experience must complete a practicum in addition to the externship. When students complete the program, they are eligible for licensure by the Virginia Department of Education with an endorsement to teach students with emotional disturbance in grades K-12. Students are offered the option of taking a full-time externship for one semester, a half-time externship for each of two semesters or an on-the-job externship for the duration of one academic year following one year of successful teaching in that setting.

A personal interview with program faculty is required as a part of the admission process.

**Foundations 9 credits**

**Human development and learning (3)**

(one of the following)

EDUS 602 Adolescent Growth and Development  
 EDUS 603 Seminar in Child Growth and Development  
 EDUS 604 Adult Development  
 EDUS 607/PSYC 607 Advanced Educational Psychology  
 EDUS 609 Learning Theories in Education

**Cultural, historical, and philosophical (3)**

(one of the following)

EDUS 601 Philosophy of Education  
 EDUS 608 History of Western Education  
 EDUS 610 Social Foundations of Education  
 EDUS 612 Education and the World's Future  
 EDUS 614 Contemporary Educational Thought  
 EDUS 673 Seminar on Educational Issues, Ethics and Policy

**Research (3)**

EDUS 660 Research Methods in Education

**Special education core 18**

SELD 530 Language Disabilities: Assessment and Teaching  
 TEDU 533 Educational Assessment of Individuals with Exceptionalities  
 TEDU 566 Diagnosis and Remediation in Reading  
 (Note: course has prerequisite.)  
 TEDU 630 Trends in Special Education  
 TEDU 631 Behavior Management of Students with Disabilities  
 TEDU 632 Secondary Programming for Students with Disabilities

**Specialization core 15**

EMOD 500 Characteristics of Students with Emotional Disturbance (3)  
 EMOD 501 Teaching Students with Emotional Disturbance (3)  
 EMOD 603 Interactive Strategies in Teaching Students with Special Needs (3)  
 TEDU 700 Externship (6)

42

**Learning disabilities****Admission requirements summary****Learning disabilities**

Degree: Semester(s) Deadline Test

	of entry:	dates:	requirements:
M.Ed.	Fall	Mar 15	GRE or MAT
	Spring	Nov 1	
	Summer	Mar 15	

The Master of Education in Special Education with a specialization in learning disabilities develops and refines the competencies needed for work with persons with learning disabilities in collaborative resource and self-contained settings at all levels, as well as in a variety of cultural environments. Students enrolling in the program will be required to complete two semesters of externship during the regular academic year and may be required to complete additional fieldwork activities and/or credits. Students in bachelor's degree or extended programs who are

planning to enroll are encouraged to consult with program faculty for assistance in selecting elective courses that provide a sound foundation and may reduce the number of additional courses necessary for certification.

Program course work encompasses broad concepts of education, research, development, related disciplines and special education to build a foundation of professional knowledge and understanding. Specialized courses develop the intensive diagnostic, remedial, decision-making and consultative skills and understandings required of a professional in learning disabilities, including the ability to recognize educational and social problems, to formulate effective individualized instructional interventions using a variety of methodologies and modifications, to incorporate accommodations and transitions into program plans, and to consult productively with appropriate personnel in the development of maximum educational opportunities for students with learning disabilities.

Applicants who hold a bachelor's degree in areas other than special education must complete a review process with program faculty as part of the admission process.

**Foundations**credits  
9**Human development and learning (3)**

(one of the following)

EDUS 602 Adolescent Growth and Development  
 EDUS 603 Seminar in Child Growth and Development  
 EDUS 607/PSYC 607 Advanced Educational Psychology  
 EDUS 609 Learning Theories in Education

**Cultural, historical and philosophical (3)**

(one of the following)

EDUS 601 Philosophy of Education  
 EDUS 608 History of Western Education  
 EDUS 610 Social Foundations of Education  
 EDUS 614 Contemporary Educational Thought

**Research (3)**

EDUS 660 Research Methods in Education

**Special education core 18**

TEDU 630 Trends in Special Education  
 TEDU 631 Behavior Management of Students with Disabilities  
 TEDU 633 Educational Assessment of Individuals with Exceptionalities  
 SELD 530 Language Disabilities: Assessment and Teaching

**Academic remediation elective (select one)**

TEDU 566 Diagnosis and Remediation in Reading  
 TEDU 569 Diagnosis and Remediation in Mathematics

**Career/vocational elective (select one)**

EDUS 503 Guidance for Exceptional Children  
 RHAB 611 Individual Counseling Approaches in Rehabilitation  
 RHAB 623 Occupational Information, Analysis and Placement

**Specialization core 15**

SELD 600 Characteristics of Persons with Learning Disabilities  
 SELD 601 Methods of Clinical Teaching  
 TEDU 700 Externship (Optional) (6)

42

## Mental retardation

### Admission requirements summary

#### Mental retardation

Degree:	Semester(s) of entry:	Deadline:	Test requirements:
M.Ed.	Fall	Mar 15	GRE or MAT
	Spring	Nov 1	
	Summer	Mar 15	

Graduates of the Master of Education in Special Education with a specialization in mental retardation may fill roles as resource room, modified resource room, or self-contained classroom teachers in varied urban, suburban or rural areas. Some graduates are employed in residential programs for individuals with mental retardation or in programs in community or state department settings. The commonwealth of Virginia licenses their employment in public or private settings serving students from kindergarten through secondary school age.

The course of study includes a minimum of 42 credits designed around three components: foundations, special education core and specialization in mental retardation. The foundations component is comprised of nine semester hours that focus on three distinct content areas: human development and learning, cultural, philosophical and historical foundations, and research and evaluation methods. The special education core of 18 semester hours focuses on a curriculum that is rooted in special education for individuals with mental retardation as well as other disabilities. The specialization in mental retardation is comprised of 15 semester hours that focus on the development of specific advanced competencies for filling the varying roles of professionals in mental retardation. With previous licensure in mental retardation, the program will require approximately one year of full-time study for completion. Students seeking initial licensure should consider the Master of Teaching, which is designed for that purpose.

credits  
9

#### Foundations

##### Human development and learning (3)

(one of the following)

EDUS 602 Adolescent Growth and Development  
EDUS 603 Seminar in Child Growth and Development  
EDUS 604 Adult Development  
EDUS 607/PSYC 607 Advanced Educational Psychology  
EDUS 609 Learning Theories in Education

##### Cultural, historical and philosophical (3)

(one of the following)

EDUS 601 Philosophy of Education  
EDUS 608 History of Western Education  
EDUS 610 Social Foundations of Education  
EDUS 612 Education and the World's Future  
EDUS 614 Contemporary Educational Thought  
EDUS 673 Seminar on Educational Issues, Ethics and Policy

##### Research (3)

EDUS 660 Research Methods in Education

#### Special education core

18

ADMS 632 Administration and Supervision of Special Education  
TEDU 630 Trends in Special Education  
TEDU 632 Secondary Programming for Students with Disabilities

TEDU 633 Educational Assessment of Individuals with Exceptionalities  
SLED 530 Language Disabilities: Assessment and Teaching  
Elective

#### Specialization core

15

MNRT 556 Introduction to Mental Retardation (3)  
MNRT 560 Curriculum Design for Students with Mental Retardation (3)  
TEDU 566 Diagnosis and Remediation in Reading (3)  
TEDU 700 Externship (6)

42

## Severe disabilities

### Admission requirements summary

#### Severe disabilities

Degree:	Semester(s) of entry:	Deadline:	Test requirements:
M.Ed.	Fall	Mar 15	GRE or MAT
	Spring	Nov 1	
	Summer	Mar 15	

The severe disabilities program is designed to prepare teachers to work with students, ages 5 to 21, in public school settings. Throughout the program, emphasis is placed on person-centered planning, school and community inclusion, transdisciplinary teamwork, and the role of the family. Courses address physical and medical management issues, functional assessment strategies, longitudinal curriculum planning, systematic instruction, augmentative and alternative communication systems, assistive technology, transition from school to adulthood, positive behavioral supports, and the special needs of students with autism or physical, sensory and health-related disabilities.

Students enrolled in the program complete a field-based externship in their school (if they currently serve students with severe disabilities) or in one of the many public schools in the Richmond area. The externship is designed to meet the student's needs for professional development and is generally completed toward the end of the master's program.

Successful completion of the 42 credit hour program results in Virginia endorsement in severe disabilities, in addition to the Master of Education degree.

credits  
9

#### Foundations

##### Human development and learning (3)

(one of the following)

EDUS 602 Adolescent Growth and Development  
EDUS 603 Seminar in Child Growth and Development  
EDUS 607/PSYC 607 Advanced Educational Psychology  
EDUS 609 Learning Theories in Education

##### Cultural, historical and philosophical (3)

(one of the following)

EDUS 601 Philosophy of Education  
EDUS 608 History of Western Education  
EDUS 610 Social Foundations of Education  
EDUS 612 Education and the World's Future  
EDUS 614 Contemporary Educational Thought  
EDUS 673 Seminar on Educational Issues, Ethics and Policy

##### Research (3)

EDUS 660 Research Methods in Education

**Special education core**

15

ADMS 632 Administration and Supervision of Special Education  
 TEDU 542 Family/Professional Partnerships  
 TEDU 631 Behavior Management of Students with Disabilities  
 TEDU 632 Secondary Programming for Students with Disabilities  
 Selective:

IDDS 600 Interdisciplinary Studies in Developmental Disabilities: Teamwork in Serving Persons with Developmental Disabilities or a course of the student's choice with adviser's permission

**Specialization core**

18

TEDU 558 Educating Students with Multiple Disabilities (3)  
 TEDU 700 Externship (6)  
 MNRT 500 Language/Communication Intervention for Young Children and Individuals with Severe Disabilities (3)  
 MNRT 610 Teaching Strategies for Students with Severe Disabilities (3)  
 MNRT 602 Assessment and Curriculum Development for Students with Severe Disabilities (3)

42

## Department of Teaching and Learning

The Department of Teaching and Learning is committed to excelling in the initial and continuing preparation of teachers for the commonwealth, with particular emphasis on early childhood through secondary education in diverse settings; to collaborating with colleagues in educational agencies; to applying research about learning in classrooms; to undertaking scholarly endeavors that examine learning and teaching processes; and to providing technical assistance to special populations and service to school divisions and agencies.

The department values:

- providing the highest quality teaching and opportunities for learning,
- integrating academic disciplines, professional studies and clinical experiences as program components for student learning,
- collaborating in the preparation of teachers and in the continuing development of faculty both within the university and in public and private educational settings,
- enabling teachers and intending teachers to work effectively with students from diverse populations and those with special needs,
- helping intending teachers become effective decision makers and practicing teachers refine their decision-making skills in the roles for which they are preparing,
- effectively modeling the use of technology to enhance and foster learning,
- incorporating, among others, developmental, cognitive and functional approaches and content areas in the preparation of personnel in early, middle, secondary and special education programs,
- serving the university through faculty participation in institutional committees and task forces, programs, and supportive research and service institutes and centers within the university, and

- serving the community through technical assistance, workshops, consulting education activities, Professional Development Schools and other partnerships.

The Department of Teaching and Learning houses six degree and certificate granting programs.

[Master of Education in Curriculum and Instruction](#)  
[Master of Education in Reading](#)  
[Master of Teaching](#)  
[Postbaccalaureate Certificate in Teaching \(Secondary\)](#)  
[Post-master's Certificate for Reading Specialist](#)  
[Ph.D. in Education](#)

For more information consult the department's Web site at [www.soe.vcu.edu/departments/tl](http://www.soe.vcu.edu/departments/tl).

**Administration**

**Michael D. Davis**  
 Department Chair

## Adult Learning, Master of Education (M.Ed.)

**Admission requirements summary****Adult Learning, Master of Education (M.Ed.)**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.Ed.	Fall	Mar 15	GRE or MAT
	Spring	Nov 1	
	Summer	Mar 15	

The Master of Education in Adult Learning is a 39-credit program of study that prepares individuals for a broad range of positions related to the education of adult learners. Graduates are found in major corporations, state and federal agencies, nonprofit and community-based organizations, human services agencies, and community colleges and university settings. Admission to the program is predicated on the "whole person" concept, taking into account life experience, academic record, references and the reasons for the student's interest in the program. An interview with the program adviser is recommended prior to admission.

The program provides a three-course foundation in educational research, evaluation and adult development. A strong core of seven courses related to the design, development and delivery of adult learning programs and activities comprises the major portion of the curriculum. The emphasis is upon equipping an educator of adults with the requisite knowledge, skills and dispositions to work with a broad array of adult learners in business and industry, government, education, non-profit, and community and human service agencies. The program also addresses the needs of educators who work with multicultural adult learners and those with special needs.

In the last two years of the program, students select one of three specialization tracks for a three-course concentration in adult literacy, human resource development or adults with disabilities. The last course in the program, ADLT 636 Capstone Seminar in Action Learning, reunites students from all three specialty tracks for a comprehensive synthesis of learning as they work in action learning teams to solve a real problem of strategic importance to an organization in the community.

A unique feature of the program is the portfolio assessment, which, in combination with the capstone seminar, replaces a comprehensive examination requirement. For the portfolio, students are required to write a reflective essay at the end of each core and specialty track course taken,



evaluating their learning experiences and how they intend to apply what has been learned. The reflective essay, along with a copy of the student's "best work" from each course is placed in the portfolio, to be reviewed at the end of the program by the student and his or her adviser. The portfolio then serves as a demonstration of the graduate's abilities to a prospective employer.

<b>Foundations</b>	credits 9
EDUS 604 Adult Development	
EDUS 660 Research Methods in Education	
EDUS 661 Educational Evaluation: Models and Designs	

<b>Core courses</b>	21
ADLT 601 The Adult Learner	
ADLT 602 Adult Program Planning, Management, and Evaluation	
ADLT 603 Learning Strategies for Adults	
ADLT 610 Consulting Skills in Adult Learning Environments	
ADLT 612 Learning in Groups and Teams	
ADLT 636 Capstone Seminar in Action Learning	
SELD 688 Lifespan Issues for Adults with Learning and Behavioral Disabilities	

<b>Specialty tracks</b>	9
Students choose a focus of nine credit hours in one of the three areas: adult literacy, human resource development or adults with disabilities. These courses are designed to be taken after the student completes foundations and core courses, with the exception of ADLT 636.	

### Adult literacy track

TEDU/ENGL/LING 552 Teaching English as a Second Language\*  
 TEDU 681 Investigations and Trends in Teaching\*\*  
 READ 602 Literacy for Adults

- \* A special section for students in the M.Ed. in Adult Learning program will be noted in the Schedule of Classes.
- \*\* A special section for students in the M.Ed. in Adult Learning program, covering trends and issues in adult literacy, with prerequisites of TEDU 552 and READ 602, or permission of instructor, will be noted in the Schedule of Classes.

### Adults with disabilities track

SEDP 616 Introduction to Disability Studies, Community Services and Business Networks  
 SEDP 618 Strategies for Managing Disabilities in the Workplace  
 TEDU 651 Topics in Education\*

- \* A special section for students in the M.Ed. in Adult Learning program, covering competitive employment for individuals with disabilities, with prerequisites of SEDP 616 and 618, or permission of instructor, will be noted in the Schedule of Classes.

### Human resource development track

ADLT 620 Human Resource Development Overview  
 ADLT 623 Organizational Learning  
 ADLT 625 Change Strategies for Human Resource Development Practitioners

## Curriculum and Instruction, Master of Education (M.Ed.)

### Admission requirements summary

#### Curriculum and Instruction, Master of Education (M.Ed.)

Indicate specialization:

Early Childhood/Elementary Education, Middle Education, Secondary Education or Instructional Technology

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.Ed.	Admissions suspended effective summer 2006.		GRE or MAT

The Master of Education in Curriculum and Instruction program is designed to provide professional and cognate experiences for veteran teachers. Individuals may select to concentrate in early childhood education, middle education, secondary education, gifted education or instructional technology. Content courses within the program are selected in consultation with an adviser from the appropriate concentration.

<b>Foundations</b>	credits 9
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#### Human development and learning (3)

(one of the following)

EDUS 602 Adolescent Growth and Development  
 EDUS 603 Seminar in Child Growth and Development  
 EDUS 604 Adult Development  
 EDUS 607/PSYC 607 Advanced Educational Psychology  
 EDUS 609 Learning Theories in Education

#### Cultural, historical and philosophical (3)

(one of the following)

EDUS 601 Philosophy of Education  
 EDUS 608 History of Western Education  
 EDUS 610 Social Foundations of Education  
 EDUS 612 Education and the World's Future  
 EDUS 614 Contemporary Educational Thought  
 EDUS 673 Seminar on Educational Issues, Ethics and Policy

#### Research (3)

EDUS 660 Research Methods in Education

#### Process level

TEDU 615 Curriculum Development  
 TEDU 617 Instructional Models

#### Content level or area of focus

TEDU 680 Externship Proposal Seminar  
 TEDU 700 Externship

Externships require a well-conceived proposal developed with an adviser and submitted the semester prior to the experience. Guidelines are in the program handbook, which may be obtained from the department office.

36

## Reading, Master of Education (M.Ed.)

### Admission requirements summary

**Reading, Master of Education (M.Ed.)**

Degree:	Semester(s)	Deadline	Test
	of entry:	dates:	requirements:
M.Ed.	Fall	Mar 15	GRE or MAT
	Spring	Nov 1	
	Summer	Mar 15	

(Department of Teaching and Learning)

The Master of Education in Reading program is designed to provide experienced teachers who are prospective reading specialists with a program of sequential and integrated experiences in areas of the reading curriculum ranging from preschool to adult levels. Students will gain an understanding of the developmental and diagnostic processes involved in teaching reading and the language arts and will become familiar with the resource and supervisory functions, which are part of the specialist role. Prior to graduation, students must complete a reading portfolio documenting their work in the program and related work experiences. The M.Ed. in Reading is an approved program (K-12) for students who meet Virginia State Department of Education requirements. The reading specialist endorsement also requires completion of three years of teaching in a reading-related field.

A cooperative agreement has been established with Virginia State University to permit selected, qualified students to complete the M.Ed. in Reading Program. Up to 12 credit hours from an approved list may be transferred from the cooperating institution. Interested students should contact the Department of Teaching and Learning.

**Foundations**

credits  
9

**Human development and learning (3)**

(one of the following)

EDUS 602 Adolescent Growth and Development  
EDUS 603 Seminar in Child Growth and Development  
EDUS 604 Adult Development  
EDUS 607/PSYC 607 Advanced Educational Psychology  
EDUS 609 Learning Theories in Education

**Cultural, historical, and philosophical (3)**

(one of the following)

EDUS 601 Philosophy of Education  
EDUS 608 History of Western Education  
EDUS 610 Social Foundations of Education  
EDUS 612 Education and the World's Future  
EDUS 614 Contemporary Educational Thought  
EDUS 673 Seminar on Educational Issues, Ethics and Policy

**Research (3)**

EDUS 660 Research Methods in Education

**Program**

15-18

TEDU 561 Reading Foundations: Sociological/Psychological Perspectives  
TEDU 562 Reading Instruction in the Content Areas  
READ 672 Internship  
READ 600 Analysis and Correction of Reading Problems  
READ 605 Organizing and Implementing Reading Programs  
Restricted elective

TEDU 525 Teaching Language Arts  
TEDU 549 Diagnostic Reading in the Secondary School  
TEDU 552/ENGL 552 Teaching English as a Second Language  
READ 601 Psycholinguistics and Language Arts Curriculum  
READ 602 Teaching Reading to Adults  
TEDU 528 Children's Literature II  
ENED 601 Young Adult Literature

**Electives**

9

Electives should be used to ensure state regulations for the endorsement are met.

36

**Teaching, Master of (M.T.)****Admission requirements summary****Teaching, Master of (M.T.)**

Indicate specialization:

(Department of Teaching and Learning)

The Master of Teaching programs are designed to incorporate eligibility for initial teaching licensure in Virginia in early childhood/elementary, middle, or secondary education (biology, chemistry, English, French, German, history, history and social studies, mathematics, physics, science, Spanish) or special education.

The approved programs include undergraduate qualifying courses as well. Individuals pursuing the extended program are awarded undergraduate and graduate degrees simultaneously; baccalaureate degree recipients who meet the admission criteria also may pursue the Master of Teaching degree program, including the qualifying courses. The combined baccalaureate and Master of Teaching program requires a minimum of 153 hours, at least 33 of which must be at the graduate level.

**Admission**

Admission criteria for holders of baccalaureate degrees are the same as for the extended program, including admission to teacher preparation.

**Liberal arts requirements**

Additionally, individuals pursuing licensure must have a liberal arts degree, as defined by VCU, germane to what they propose to teach: for secondary, a major in the subject to be taught; for middle, a major in one of the subjects traditionally taught in middle grades (English, mathematics, history and social studies, or a science); for early childhood/elementary or special education, a major in one of the content areas typically taught (mathematics, a science, English, history or a social science) is particularly appropriate, but majors in other liberal arts areas are acceptable.

Individuals who do not hold such a degree may satisfy it as follows:

- for middle or secondary education, the required and, as appropriate, cognate courses in the pertinent academic major.
- for early childhood/elementary, a liberal arts equivalency totaling at least 70 arts and sciences semester credits and consisting of no less than six hours in English (including composition), six hours in mathematics and statistics, three hours in human behavior and institutions, 12 hours in humanities, and 12 hours in science (with at least one laboratory course in a life science and another laboratory course in a physical science); and the remaining 31 credits from courses in literature, history, art or music history, foreign languages, philosophy and religious studies, African American studies, anthropology, economics, geography, international studies, political science, psychology, sociology, urban studies, women's studies, or classical studies.

Additional information about the liberal arts requirements for early childhood/elementary, middle and secondary is listed under the pertinent program in the Department of Teaching and Learning section of the [Undergraduate Bulletin](#).

See the [Undergraduate Bulletin](#) for detailed information on the requirements of the various baccalaureate degrees in the College of Humanities and Sciences.

#### State licensure examination

Successful completion (defined as meeting or exceeding the scores established by the Virginia State Board of Education) on the state-mandated licensure examination, currently Praxis I, is required for admission to teacher preparation. Students must be admitted to teacher preparation before enrolling in any clinical course, including practica and corequisites to clinical courses.

Requirements for both initial licensure and added endorsements include taking and achieving state-established pass scores on the Praxis II specialty area tests.

#### Standards of Learning

Much of the pre-kindergarten through grade 12 curriculum is based on the commonwealth of Virginia's current Standards of Learning (SOLs). Individuals preparing to be teachers are advised to examine the SOLs for the grade levels and content areas they plan to teach. Since the content and concepts associated with one or more SOLs may be incorporated into a course in the College of Humanities and Sciences curriculum and not a college curriculum, one may need to study several of these SOLs on his/her own. The Department of Teaching and Learning Web site, connected to the School of Education Web page has a link to the SOLs.

#### Technology standards

The use of computers, graphing calculators, science probeware and other technologies is integral to successful teaching in today's schools. Individuals preparing to teach must be competent on each of the eight standards in Virginia's Technology Standards for Instructional Personnel. These standards may be reached through the Department of Teaching and Learning Web page.

Students are advised to consult with the professional studies adviser regarding the program's requirements for demonstrating competence. Several of the standards may be documented as met by passing the Computer Literacy Examination offered online through KnowledgeNet.

education. This program offers liberal studies curriculum designed through an interdisciplinary collaboration among professors in the College of Humanities and Sciences and the School of Education in consultation with successful area teachers. It targets core knowledge across the four major subject areas represented in Virginia's Standards of Learning (mathematics, sciences, social sciences and language arts/communication) while also providing a university-level skill set and knowledge base. Throughout the undergraduate program, contact with area schools and young learners is programmed into service and experiential learning venues.

Transfer students intending to be elementary teachers (and completing the Master of Teaching in Early and Elementary Education) are required to meet with advisors for the LSEE track prior to registering for courses. Advisors will evaluate all courses successfully completed outside of the LSEE track prescribed curriculum (from VCU or elsewhere) to determine their transferability to the LSEE track.

Majors are encouraged to select at least one minor in order to deepen knowledge and appreciation of a subject area. Philosophy, religious studies, African American studies and international studies have relevance in their understanding of human investigation of knowledge, human behavior and world cultures. A minor in a science area like environmental studies may be more "employable" because of school and societal concerns about our planet and its preservation. Whatever the humanities and sciences minor, the choice should be based on the student's interest and perceived relevance.

Consult with the appropriate professional studies advisor for additional information regarding professional studies and liberal arts requirements (refer to the P-6 program in the Undergraduate Bulletin).

#### Professional studies requirements (56 credits)

	credits
<b>Undergraduate credits</b>	
EDUS 305/PSYC 305 Educational Psychology	3
HPEX 390 Physical Education for the Elementary Teacher	3
PSYC 301 Child Psychology	3
TEDU 310 Practicum I (with TEDU 414 and TEDU 426)	2
TEDU 310 Practicum II	2
TEDU 351/ENGL 351 Children's Literature I	3
TEDU 414 Curriculum and Methods for Young Children	4
TEDU 426 Teaching Reading and Other Language Arts	3
	<hr/> 23

#### Graduate credits

EDUS 673 Seminar on Educational Issues Ethics and Policy	3
TEDU 517 Science Education in the Elementary School	3
TEDU 522 Teaching Mathematics for Elementary Education	3
TEDU 566 Diagnosis and Remediation in Reading	3
TEDU 591 Social Studies Education in the Elementary School	3
TEDU 605 Theory and Practice of Educating Individuals with Special Needs	3
EDUS 607/PSYC 607 Advanced Educational Psychology	3
TEDU 626 Home-school Communication and Collaboration	3

### Early childhood/elementary education, P-6

#### Admission requirements summary

##### Early childhood/elementary education, P-6

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.T.	Fall	Mar 15	GRE or MAT
	Spring	Nov 1	
	Summer	Mar 15	

Freshman students bound for the Master of Teaching in Early and Elementary Education program are required to enroll in the Bachelor of Interdisciplinary Studies — Liberal Studies Track for early and elementary

TEDU 672 Internship I and II (K and grades 1-5 placements) 9

33\*

\* All 500-level methods courses (TEDU 517, 522, 566, and 591) must have already been completed or taken concurrently with TEDU 310, Practicum II.

Note: At least 33 credit hours must be taken at the graduate level.

## Middle education, 6-8

### Admission requirements summary

#### Middle education, 6-8

Degree:	Semester(s)	Deadline	Test
	of entry:	dates:	requirements:
M.T.	Fall	Mar 15	GRE or MAT
	Spring	Nov 1	
	Summer	Mar 15	

Consult with the appropriate professional studies adviser, for in addition to professional studies there are liberal arts requirements. (Refer to the 6-8 program in the [Undergraduate Bulletin](#).)

#### Professional studies requirements (42 credits)

	credits
<b>Undergraduate</b>	
EDUS 301 Human Development and Learning	3
TEDU 310 Practicum A (concurrent with TEDU 544)	1
TEDU 310 Practicum B (concurrent with TEDU 521 or 540)	1
TEDU 310 Practicum C (concurrent with TEDU 550 or the course not taken with B)	1
TEDU 407 Educational Media: Utilization	3
	9

#### Graduate

Choose two of the following	6
TEDU 521 Teaching Mathematics for Middle Education (3)	
TEDU 540 Teaching Middle and High School Science (3)	
TEDU 550 Teaching Interdisciplinary Language Arts and Social Studies in the Middle School (3)	

Complete each of these courses	
TEDU 544 Introduction to the Middle School	3
TEDU 562 Reading Instruction in the Content Areas	3
EDUS 607/PSYC 607 Advanced Educational Psychology	3
TEDU 672 Internship I and II	9
EDUS 673 Seminar on Educational Issues, Ethics and Policy	3
TEDU 681 Investigations and Trends in Teaching*	3

Graduate selective chosen from the following	3
TEDU 554/CMSC 554 Applications of Computers in the Teaching of Mathematics I	
TEDU 556 Computer Applications in Education	
TEDU 600 Organizing for Effective Classroom Instruction	
TEDU 605 Theory and Practice of Educating Individuals with Special Needs	
TEDU 626 Home-school Communication and Collaboration	
EDUS 660 Research Methods in Education	
ENED 601/ENGL 601 Young Adult Literature	

33

\* Pertinent subject section (e.g., English, mathematics, science or social studies).

Note: At least 33 credit hours must be taken at the graduate level.

## Secondary education, 6-12

### Admission requirements summary

#### Secondary education, 6-12

Degree:	Semester(s)	Deadline	Test
	of entry:	dates:	requirements:
M.T.	Fall	Mar 15	GRE or MAT
	Spring	Nov 1	
	Summer	Mar 15	

The Master of Teaching with a concentration in secondary education leads to endorsement in one of these disciplines: biology, chemistry, economics, English, French, geography, German, history, mathematics, physics, political science, science, Spanish.

#### Professional studies requirements (39 credits)

	credits
<b>Qualifying courses</b> (undergraduate)	6
EDUS 301 Human Development and Learning	
TEDU 310 Practicum (2 credits with TEDU 537, 1 credit with TEDU 540, 543, 545, 547 or 548)	
<b>Foundation courses</b>	6
EDUS 607/PSYC 607 Advanced Educational Psychology	
EDUS 673 Seminar on Educational Issues, Ethics and Policy	
<b>Concentration courses</b>	9
TEDU 537 Secondary School Curriculum (3)	
Choose discipline for licensure/endorsement sought (3)	
TEDU 540 Teaching Middle and High School Sciences	
TEDU 543 Teaching Secondary School Foreign Languages	
TEDU 545 Teaching Secondary School Mathematics	
TEDU 547 Teaching Secondary School Social Studies	
TEDU 548 Teaching Secondary School English	
TEDU 681 Investigations and Trends in Teaching (3)	

#### Selectives 9

Graduate selectives are to be chosen from the following:

## 1. Three credits from:

## Technology:

TEDU 556 Computer Applications in Education

TEDU 554/CMSC 554 Applications of Computers in the Teaching of Mathematics I

## Reading:

TEDU 562 Reading Instruction in the Content Areas

## Classroom management:

TEDU 600 Organizing for Effective Classroom Instruction

TEDU 631 Behavior Management of Students with Disabilities

## Special education:

TEDU 605 Theory and Practice of Educating Individuals with Special Needs

Six graduate credits from other courses in (1) above, from the academic major or from courses such as these:

TEDU 521 Teaching Mathematics for Middle Education (required in math)

TEDU 626 Home-school Communication and Collaboration

ENED 601/ENGL 601 Young Adult Literature

All selectives should be chosen in consultation with the professional studies adviser.

Note: A minimum of 21 credits, including EDUS 300, EDUS 301, TEDU 310, TEDU 537, one of (TEDU 540, 543, 545, 547 or 548), EDUS 607 or 673 and the required selective (see 1 above), must be completed prior to the internship.

**Clinical experience**

TEDU 672 Internship

9

39\*

\* At least 33 credit hours must be taken at the graduate level.

**Special education, K-12****Admission requirements summary****Special education, K-12**

Behavioral Disorders/Learning Disabilities, Behavioral Disorders/Mental Retardation or Learning Disabilities/Mental Retardation

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.T.	Admissions suspended until further notice.		

Department of Teaching and Learning

The Master of Teaching in Special Education program leads to dual endorsement in two of these three special education areas: emotional disturbance, learning disabilities or mental retardation. The professional sequence in the Master of Teaching in Special Education program is

designed to develop competencies needed to work with children and youth in two of these areas of special education in kindergarten through 12th grade. (All courses listed below are three credits unless otherwise indicated.)

**Required courses**credits  
30**Undergraduate**

EDUS 300 Foundations of Education

EDUS 301 Human Development and Learning or

PSYC 305 Educational Psychology

TEDU 330 Survey of Special Education

TEDU 426 Teaching Reading and Other Language Arts

**Graduate**

TEDU 521 Teaching Mathematics for Middle Education or

TEDU 522 Teaching Mathematics for Elementary Education

TEDU 531 Collaborative/Consultation Skills for Working with Families and Professionals

TEDU 533 Educational Assessment of Individuals with Exceptionalities

SELD 530 Language Disabilities: Assessment and Teaching or MNRT 500 Language Intervention for Young Children and Learners with Severe Disabilities

TEDU 631 Behavior Management of Students with Disabilities

TEDU 632 Secondary Programming for Students with Disabilities

**Selectives**

9

**Social/cultural foundations selective**

(choose one from the following list)

EDUS 601 Philosophy of Education

EDUS 608 History of Western Education

EDUS 610 Social Foundations of Education

EDUS 612 Education and the World's Future

EDUS 614 Contemporary Educational Thought

EDUS 673 Seminar on Educational Issues, Ethics and Policy

**Educational/psychological foundations selective**

(choose one from the following list)

Non-psychology majors must take:

EDUS/PSYC 607 Advanced Educational Psychology

Psychology majors may select one of the following:

EDUS 602 Adolescent Growth and Development

EDUS 603 Seminar in Child Growth and Development

EDUS/PSYC 607 Advanced Educational Psychology

EDUS 609 Learning Theories in Education

Option: With adviser's permission, students with a strong background in educational psychology and/or child development may select EDUS 660 Research Methods in Education.

**Graduate or undergraduate selective**

This one selective is a course at the 600-level or below chosen from the following list:

TEDU 542 Parent/Professional Partnership

A second language course

A second reading course

A course in the third special education area (emotional disturbance, learning disabilities or mental retardation)

A course in early childhood special education (ESCE)

A course in counselor education (CLEd)

A course in rehabilitation counseling (RHAB)

A course approved by the program faculty

## Concentration courses

28

(two of the following three special education areas)  
12 semester credit hours in courses and  
16 semester credit hours in clinical experiences

### Emotional disturbance

EMOD 400 Characteristics of Children/Adolescents with  
Emotional Disturbance  
EMOD 501 Teaching Students with Emotional  
Disturbance  
Clinical experience

TEDU 310 Practicum:  
Emotional Disturbance (2)  
EMOD 672 Internship:  
Emotional Disturbance (6)

### Learning disabilities

TEDU 444 Introduction to Learning Disabilities  
SELD 501 Methods of Clinical Teaching  
Clinical experience

TEDU 310 Practicum:  
Learning Disabilities (2)  
SELD 672 Internship:  
Learning Disabilities (6)

### Mental retardation

MNRT 400 Characteristics of Children and Youth with  
Mental Retardation  
MNRT 560 Curriculum Design for Students with Mental  
Retardation  
Clinical experience

TEDU 310 Practicum:  
Mental Retardation (2)  
MNRT 672 Internship:  
Mental Retardation (6)

67\*

\* A minimum of 33 credit hours must be taken at the graduate level.

## Programs in Recreation, Parks and Sport Management

The Department of Recreation, Parks and Sport Management provides a professional core of courses leading to a Master of Science degree with one of three specializations: leisure service management, therapeutic recreation or sport leadership. Graduates from this program seek positions with government departments, nonprofit agencies, and commercial recreation and sport enterprises. Students who desire careers in improving the lives of others, developing and managing sport programs and facilities, meeting the needs of persons with disabilities, preserving and conserving natural resources, or creating leisure opportunities that provide a sense of satisfaction for participants, should review departmental program offerings.

### Administration

**Edmund O. Acevedo**  
Department Chair

## Recreation, Parks and Sport Leadership, Master of Science (M.S.)

## Admission requirements summary

### Recreation, Parks and Sport Leadership, Master of Science (M.S.)

Indicate specialization:

Students may select one of three specialty areas: leisure service management, therapeutic recreation or sport leadership. Entry into the Sport Leadership specialty area requires admission to the VCU SportsCenter Program. For more information and to request a VCU SportsCenter application, contact the VCU SportsCenter at (804) 828-TEAM or visit the Web at [www.vcu.edu/sportscenter](http://www.vcu.edu/sportscenter).

Leisure service management is for students who want to expand their professional preparation for general administration and leadership in public or private leisure service organizations. Therapeutic recreation is for students seeking advanced study to prepare for careers in leadership and supervision of recreation programs for disabled persons in clinical, residential or community settings. In these programs of study, specialty courses and electives focus on either leisure service management or therapeutic recreation.

## Leisure service management

## Admission requirements summary

### Leisure service management

<b>Degree:</b>	<b>Semester(s)</b>	<b>Deadline</b>	<b>Test</b>
M.S.	of entry: Admissions suspended until further notice.	dates:	requirements: GRE or MAT

credits  
9

### Research core

HEMS/RPSL 600 Research Methods in Health, Movement  
Sciences and Recreation (3)  
HEMS/RPSL 602 Statistical Applications in Health, Movement  
Sciences and Recreation (3)  
Choose one:

RPSL 797 Project Research (3)  
RPSL Thesis (3)  
Elective approved by adviser (3)

### Program core

RPSL 601 Conceptual Foundations of Leisure (3)  
Choose one:

RPSL 606 Directed Readings (3)  
RPSL 607 Field Instruction (3)

### Specialty

#### Leisure Service Management

RPSL 609 Program Development and  
Management (3)  
RPSL 610 Organization and  
Administration of Recreation and  
Parks Systems (3)

### Electives

(course work in related disciplines is selected with the consent of  
the student's adviser)

15

36

## Sport leadership

## Admission requirements summary

### Sport leadership

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.	Fall Spring Summer	Mar 15 Nov 1 Mar 15	GRE or MAT

#### Special requirements:

Students should contact the VCU Sports Center at (804) 828-8326 directly for information and application materials.

The VCU SportsCenter offers structured graduate programs combining classroom theory with exposure to relevant field experiences. Through the sport leadership program, students will be prepared to assume the responsibilities for developing professional and amateur athletes, and managing sports programs in a variety of academic, public and private sectors. The interdisciplinary faculty and curriculum give students the opportunity to concentrate on areas most important to them and most relevant to the sports business.

The SportsCenter offers graduate courses online for those students who want to take advantage of the SportCenter's educational opportunities via the Internet. Currently, three classes are available each semester.

For more information and to obtain an application for the sport leadership program, phone (804) 828-TEAM (8326), (877) 799-4287 (toll free), fax: (804) 828-7526 or visit the Web site at [www.vcu.edu/sportcenter](http://www.vcu.edu/sportcenter).

### Required core

SPTL 603 Research and Evaluation Processes in Recreation, Parks and Sport Systems (3)  
SPTL 630 Sociology of Sport (3)  
SPTL 632 Sports Business (3)  
SPTL 634 Coaching and Administration (3)  
SPTL 635 Leadership Models in Sports (3)

credits  
15

### Selective courses

SPTL/HEMS 591 Topical Seminar (1-3, maximum 6)  
SPTL 604 Research Practicum (3)  
SPTL 606 Directed Readings (3)  
SPTL 608 Action Learning Project (3)  
SPTL 609 Program Development and Management (3)  
SPTL 631 Contemporary Issues (3)  
SPTL 633 Sports Marketing (3)  
SPTL 641 Sports Psychology (3)  
SPTL 651 Advanced Coaching Techniques (3)  
SPTL 691 Topics in Sport Leadership (3)

9-12

### Field experiences

SPTL 604 Research Practicum (3)  
SPTL 607 Field Instruction (3)  
SPTL 692 Independent Study (1-3)  
SPTL 695 Externship (3-6)

9-12

### Total

36

## Therapeutic recreation

## Admission requirements summary

### Therapeutic recreation

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.	Admissions suspended until further notice.		GRE or MAT

### Research core

HEMS/RPSL 600 Research Methods in Health, Movement Sciences and Recreation (3)  
HEMS/RPSL 602 Statistical Applications in Health, Movement Sciences and Recreation (3)  
Choose one:

RPSL 797 Project Research (3)  
RPSL Thesis (3)  
Elective approved by adviser (3)

credits  
9

### Program core

RPSL 601 Conceptual Foundations of Leisure (3)  
Choose one:  
RPSL 606 Directed Readings (3)  
RPSL 607 Field Instruction (3)

6

### Specialty (choose one of the specialty areas)

6

#### Therapeutic Recreation

RPSL 506 Contemporary Issues in Therapeutic Recreation (3)  
RPSL 605 Program Development in Therapeutic Recreation (3)

### Electives

(course work in related disciplines is selected with the consent of the student's adviser)

15

36



# School of Engineering

The School of Engineering began operation on July 1, 1995 with its first class graduating in May 2000. Computer Science joined the School of Engineering in the fall semester 2001. Undergraduate degrees are offered in computer science, biomedical engineering, chemical engineering, electrical and computer engineering and mechanical engineering. The School of Engineering offers a Master of Science degree in engineering, biomedical engineering and computer science. The Doctor of Philosophy degree is offered in engineering and in biomedical engineering. The biomedical engineering program also participates in an M.D./Ph.D. program with the School of Medicine. Students in the School of Engineering's advanced degree programs may access courses via the Commonwealth Graduate Engineering Program (CGEP), which coordinates course offerings through the University of Virginia, Virginia Polytechnic Institute and State University, George Mason University and Old Dominion University (see the Interdisciplinary and Cooperative Graduate Studies section of this bulletin for details). The School of Engineering's main offices are located on the Monroe Park Campus of VCU. Biomedical engineering, established in 1984, is located on the MCV Campus of VCU and has well-established ties to the schools on that campus. Graduate degree programs in the School of Engineering are coordinated through the assistant dean for graduate affairs. For further information on these programs, contact the assistant dean for graduate affairs in the School of Engineering at (804) 828-0266.

## Administration

601 W. Main St.  
P.O. Box 843068  
Richmond, VA 23284-3068  
(804) 828-0190  
Fax (804) 828-9866  
[www.egr.vcu.edu](http://www.egr.vcu.edu)

**Russell Jamison**  
Professor and Dean

**L. Thomas Overby**  
Assistant Dean for Graduate Affairs

## Graduate programs

The School of Engineering offers the following graduate degree programs:

### Master of Science

Biomedical Engineering

Computer Science

Engineering – with tracks in:

- Chemical and Life Science Engineering
- Electrical and Computer Engineering
- Engineering
- Mechanical Engineering

### Doctor of Philosophy

Biomedical Engineering

Engineering – with tracks in:

- Chemical and Life Science Engineering

- Computer Science
- Electrical and Computer Engineering
- Engineering
- Mechanical Engineering

## Joint degree

M.D./Ph.D. in Biomedical Engineering in participation with the School of Medicine

## Interdisciplinary and cooperative studies degree

M.S. Commonwealth Graduate Engineering Program

## Postbaccalaureate certificate

Computer Science

## Accreditation

Biomedical Engineering (bachelor's degree) Accreditation Board for Engineering and Technology Chemical and Life Science Engineering (bachelor's degree) Accreditation Board for Engineering and Technology Electrical and Computer Engineering (bachelor's degree) Accreditation Board for Engineering and Technology Mechanical Engineering (bachelor's degree) Accreditation Board for Engineering and Technology Computer Science (bachelor's degree) Accreditation Board for Engineering and Technology

## Registration

In the biomedical engineering program, all new students begin their course of study in the fall semester (August). Spring semester admissions require the recommendation of the graduate program director, approval of the chair and the assistant dean for graduate affairs. Students may begin a course of study in either the fall or spring semesters for the engineering and computer science graduate programs, however a start in the fall semester is preferred. For the CGEP, students may begin a course of study in either the fall or spring semester.

## Commonwealth Graduate Engineering Program

The Commonwealth Graduate Engineering Program is a collaborative effort of the University of Virginia, Virginia Commonwealth University, Virginia Polytechnic Institute and State University, Old Dominion University, and George Mason University. Mary Washington College participates as a funded receive site.

See the School of Engineering Graduate Programs section of this bulletin for information on VCU's graduate programs in engineering.

## Administration

**L. Thomas Overby**  
Assistant Dean for Graduate Affairs

The VCU Commonwealth Graduate Engineering Program (CGEP) director works closely with the other CGEP directors, the VCU Dean of School of Engineering, and local businesses and industries.

## Program description

Students who have baccalaureate degrees in engineering or strong backgrounds in the sciences may work toward a master's degree in engineering on the Academic Campus of VCU. Graduate engineering courses are available from the CGEP member universities via interactive television, the Web and two-way audio/video conferencing. In addition to the required engineering courses, elective courses are available in applied mathematics, mathematical statistics, chemistry, operations research, and physics in classes at VCU. The following academic programs are available through CGEP:

- Chemical Engineering
- Civil and Environmental Engineering
- Computer Science
- Electrical and Computer Engineering
- Engineering Management
- Industrial and Systems Engineering
- Manufacturing and Design Engineering
- Materials Sciences and Engineering
- Mechanical and Aerospace Engineering
- Modeling and Simulation

## Degree-seeking students

Students enrolling in the program should apply for admission in a given academic area of study and may select courses from any of the participating institutions, consistent with selected degree requirements.

## Nondegree-seeking students

Qualified individuals may enroll in a particular course without pursuing a formal degree program of study. Admission will be based on the individual's academic preparation and the availability of space.

## Admission requirements

Students should apply for admission to the CGEP University offering the desired degree program. Applicants should have a "B" average, but a successful professional experience may strengthen admission credentials. Three recommendations from persons who are qualified to give information concerning the applicants' probable success in the program and the completion of the Graduate Record Examination (GRE) also are required.

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## Engineering, Doctor of Philosophy (Ph.D.)

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### Admission requirements summary

#### Engineering, Doctor of Philosophy (Ph.D.)

Indicate specialization:

The School of Engineering offers a Doctor of Philosophy in Engineering with five tracks. The engineering program utilizes the faculty and research facilities of the Computer Science Department as well as those of Chemical and Life Science Engineering, Electrical and Computer Engineering, and Mechanical Engineering to expose students to advanced and emerging technologies. Research thrusts in the School of Engineering include computer science, life sciences, micro-nano technology, and manufacturing and design. Engineering Ph.D. degrees are interdisciplinary and provide a wide array of specialization areas including microelectronics, silicon fabrication, VLSI design, networks, embedded systems, image/signal processing, photonics/optical electronics, neural networks, MEMS, digital communications, micro-nanotechnology, smart materials and devices, robotics, manufacturing and design, polymers, biochips, biochemical and biological engineering, fuel cells, software engineering, parallel processing, databases, compiler theory, machine learning, and artificial intelligence. These areas cross the discipline lines of computer science, chemical, electrical, and mechanical Engineering.

For students who want to study and conduct research in these areas or related areas, the following tracks are available:

- Chemical and life science engineering track (EGRC)
- Computer science track (CMSC)-Ph.D. only
- Electrical and computer engineering track (EGRE)
- Engineering track (ENGR)
- Mechanical engineering track (EGRM)

Each track can be tailored to meet the individual student's academic goals and research interests. Students seeking to take course work and conduct their research in one of these tracks should contact the graduate program coordinator or program chair of the desired track for detailed information about that track.

## General requirements for the doctoral degree in engineering

### Assistantships

A number of full or partial teaching and research assistantships are available in the engineering, biomedical engineering and computer science programs. Assistantships are awarded based on academic performance. Full support assistantships are for a 12-month period and cover tuition, fees and a stipend. A brief description of financial aid based on demonstrated need is detailed in the chapter of this bulletin regarding financial aid. Need-based aid programs include National Direct Student Loan, college work-study and institutional loans.

### The student adviser and the advisory committee

The successful completion of the requirements for the Ph.D. degree includes an original research project, the progress of which is guided by a faculty adviser and monitored by an advisory committee. Students receive guidance and counsel from the graduate program director prior to the appointment of the permanent adviser. The permanent adviser holds the primary responsibility for directing the development of the student in the program and providing the appropriate guidance and counsel essential to the scholarly development of the student. An advisory committee, appointed shortly after the permanent adviser is appointed, serves as both an examining and consultative body. Its function is to assist the development of the student. Committee members hold a special responsibility as a source of counsel for the student. For details, students

should contact either the respective graduate program director or the program chair.

#### Graduate degree requirements

All full-time graduate students are expected to register for a minimum of 12 hours of graduate credits per semester and at least one semester hour during the summer, exclusive of audited courses. This requirement includes research.

At least half of the credits required in the student's program must be those designated as exclusively for graduate students; that is, those at the 600 level or above.

Graduate students are required to remain in good academic standing through the course of their degree program. Unsatisfactory student performance includes:

- the assignment of a grade of "U," "D" or "F" in any course.
- failure to maintain a cumulative GPA of 3.0 or greater.
- failure to pass the written or oral comprehensive examination.
- failure to pass the final examination.

A student whose performance is unsatisfactory must successfully petition the dean of the Graduate School to continue in the graduate program. Unsatisfactory performance also constitutes grounds for the termination of financial assistance to the student.

Graduate students may not take the comprehensive examination for the Ph.D. degree if their overall GPA is less than 3.0 or if the GPA for courses within the program is below 3.0. Students may not take the final oral examination for the Ph.D. degree if their overall GPA is below 3.0. The student's advisory committee is the examining body for the administration of the comprehensive examinations and the final examination.

In addition to these requirements and those set forth by the university, students must meet the requirements for specific degrees set forth in the School of Engineering program listings.

#### Enrollment information

#### Nondegree-seeking students

Students not admitted to a degree program must obtain permission from the program director and chair before being allowed to register for courses.

#### Termination of enrollment

The university reserves the right to terminate the enrollment of any student for unlawful, disorderly or immoral conduct or for persistent failure to fulfill the purposes for which the student was matriculated.

## Chemical and Life Science Engineering Track

### Admission requirements summary

#### Chemical and Life Science Engineering Track

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall	Jul 1	GRE
		(Feb 15 for financial assistance)	
	Spring	Nov 15	

#### Typical program of study – M.S. to Ph.D. in Engineering

	credits
Core component – Mfg. Systems and business/management (unless requirement met at master's level)	6
Concentration component – CLSE course work	6
Track electives – engineering or science course work	-
Directed research – CLSE 697	21
Total (minimum)	33

Students entering the doctoral program with a B.S. degree, but not the M.S., will require a minimum of 60 post baccalaureate credits (33 for M.S. level, including core courses, and an additional 27 for Ph.D. level).

#### Typical program of study - B.S. to Ph.D. in Engineering

	credits
Core component – Mfg. Systems and business/management	6
Concentration component – CLSE course work	15
Track electives – engineering or science course work	6
Directed research – CLSE 697	33
Total (minimum)	60

A minimum of three years of study, including research, is necessary to complete all requirements for the Ph.D. A period of residence of at least three consecutive semesters is required. Residency is defined as registration for at least nine credits per semester. A time limit of seven calendar years, beginning at the time of first registration, is placed on work to be credited toward the Ph.D.

#### Curriculum

There are four components of each Ph.D. in Engineering track.

**Core component.** This component emphasizes the study of manufacturing systems and business/management principles.

**Concentration (track-specific) component.** This component allows the student to pursue a series of courses that focus on a specific field of engineering and serve as the student's primary engineering discipline.

**Track electives component.** This component allows the student to take courses in either engineering or science with approval of the student's adviser.

**Directed research component.** This component emphasizes research directed toward completion of degree requirements under the direction of an adviser and advisory committee.

#### Degree requirements

A minimum of 60 credit hours beyond the bachelor's degree, including research credits, is generally required for the Ph.D. in Engineering. Students holding the master's degree (and six credits of core course work) must complete a minimum of six semester credits in concentration course work and 21 semester credits in dissertation research. The student's adviser must approve all course work. Ph.D. students must take a minimum of 27 semester credits (including research) beyond the master's

degree. In addition to conducting significant research, all engineering graduate students must complete course work in the two core areas of manufacturing and design (ENGR 501 or ENGR 502 or ENGR 565) and business and management (MGMT 641 or MGMT 655 or MGMT 540) unless credits were received for these courses (or equivalent courses) as part of the master's degree. No elective courses may be used for both M.S. and Ph.D. degrees. At least half of the credits required in the student's program must be those designated as exclusively for graduate students, that is those at the 600 level or above.

#### Admission requirements

In addition to the general requirements for admission to graduate programs in the Graduate School and the School of Engineering, applicants to the chemical and life science engineering track must have a B.S. degree in chemical and life science engineering or a closely related discipline.

Acceptance of an applicant is based upon the recommendation of the Admissions Committee with approval of the program chair and the assistant dean for graduate affairs.

#### Registration

Students may begin a course of study in either the fall or spring semesters for the engineering graduate programs, although a start in the fall semester is preferred.

#### Comprehensive examinations

In order to advance to doctoral candidacy, the student must pass both written and oral comprehensive examinations. The written examination(s) focuses on the subject matter deemed critical as a foundation in the program. The examination(s) is largely based on material covered in required course work and its application to theoretical and practical problems. The oral examination, which follows successful completion of the written examination(s), is administered to assess the ability of the student to integrate information and display an appropriate mastery of problem-solving capabilities. Graduate students may not take the comprehensive exam if their overall GPA is less than 3.0. Students must also have a GPA of at least 3.0 for courses within the program in order to take the comprehensive exam. For further details, see the graduate program director or the program chair.

#### Admission to candidacy

Before admission to candidacy for the doctorate, students must have: (1) completed required course work, (2) successfully completed the comprehensive examinations and (3) fulfilled all additional departmental requirements. A student may seek admission to candidacy for the Doctor of Philosophy degree without first completing the research and thesis portion of the Master of Science degree.

#### Dissertation research

The student must conduct a substantial original investigation under the supervision of the permanent adviser and prepare a dissertation reporting the results of this research and analyzing its significance in relation to existing scientific knowledge.

When the dissertation has been completed, copies in accepted form and style are submitted to the members of the advisory committee. The committee members decide upon the acceptability of the candidate's

dissertation. A favorable unanimous vote is required to approve the dissertation and all examiners are required to vote.

If the advisory committee accepts the dissertation for defense, the candidate appears before them for a final oral examination. This examination is open to all members of the faculty. The final oral examination will be limited to the subject of the candidate's dissertation and related matters. A favorable vote of the candidate's advisory committee and no more than one negative vote shall be required for passing the final oral examination. All committee members must vote. There shall be an announcement of the candidate's name, department and title of dissertation, together with the day, place and hour of the final oral examination at least 10 working days in advance.

## Computer Science Track

### Admission requirements summary

#### Computer Science Track

Degree:	Semester(s)	Deadline	Test requirements:
Ph.D.	Fall	Jul 1 (Feb 15 for financial assistance)	GRE
	Spring	Nov 15	

### Typical program of study - M.S. to Ph.D. in Engineering

	credits
Core component – Mfg. Systems and business/management (unless requirement met at master's level)	6
Concentration component - CMSC course work	6
Track electives – engineering or science course work	-
Directed research – ENGR 697	21
Total (minimum)	33

A minimum of three years of study, including research, is necessary to complete all requirements for the Ph.D. A period of residence of at least three consecutive semesters is required. Residency is defined as registration for at least nine credits per semester. A time limit of seven calendar years, beginning at the time of first registration, is placed on work to be credited toward the Ph.D.

#### Curriculum

There are four components of each Ph.D. in Engineering track.

**Core component.** This component emphasizes the study of manufacturing systems and business/management principles.

**Concentration (track-specific) component.** This component allows the student to pursue a series of courses that focus on a specific field of engineering and serve as the student's primary engineering discipline.

**Track electives component.** This component allows the student to take courses in either engineering or science with approval of the student's adviser.

**Directed research component.** This component emphasizes research directed toward completion of degree requirements under the direction of an adviser and advisory committee.

### Degree requirements

A minimum of 60 credit hours beyond the bachelor's degree, including research credits, is generally required for the Ph.D. in Engineering. Students holding the master's degree (and six credits of core course work) must complete a minimum of six semester credits in concentration course work and 21 semester credits in dissertation research. The student's adviser must approve all course work. Ph.D. students must take a minimum of 27 semester credits (including research) beyond the master's degree. In addition to conducting significant research, all engineering graduate students must complete course work in the two core areas of manufacturing and design (ENGR 501 or ENGR 502 or ENGR 565) and business and management (MGMT 641 or MGMT 655 or MGMT 540) unless credits were received for these courses (or equivalent courses) as part of the master's degree. No elective courses may be used for both M.S. and Ph.D. degrees. At least half of the credits required in the student's program must be those designated as exclusively for graduate students, that is those at the 600 level or above.

### Admission requirements

In addition to the general requirements for admission to graduate programs in the Graduate School and the School of Engineering, applicants to the computer science track must have a B.S. and master's degree in engineering, computer science or a closely related discipline.

Acceptance of an applicant is based upon the recommendation of the Admissions Committee with approval of the program chair and the assistant dean for graduate affairs.

### Registration

Students may begin a course of study in either the fall or spring semesters for the engineering graduate programs, although a start in the fall semester is preferred.

### Comprehensive examinations

In order to advance to doctoral candidacy, the student must pass both written and oral comprehensive examinations. The written examination(s) focuses on the subject matter deemed critical as a foundation in the program. The examination(s) is largely based on material covered in required course work and its application to theoretical and practical problems. The oral examination, which follows successful completion of the written examination(s), is administered to assess the ability of the student to integrate information and display an appropriate mastery of problem-solving capabilities. Graduate students may not take the comprehensive exam if their overall GPA is less than 3.0. Students must also have a GPA of at least 3.0 for courses within the program in order to take the comprehensive exam. For further details, see the graduate program director or the program chair.

### Admission to candidacy

Before admission to candidacy for the doctorate, students must have: (1) completed required course work, (2) successfully completed the comprehensive examinations and (3) fulfilled all additional departmental requirements. A student may seek admission to candidacy for the Doctor of Philosophy degree without first completing the research and thesis portion of the Master of Science degree.

### Dissertation research

The student must conduct a substantial original investigation under the supervision of the permanent adviser and prepare a dissertation reporting the results of this research and analyzing its significance in relation to existing scientific knowledge.

When the dissertation has been completed, copies in accepted form and style are submitted to the members of the advisory committee. The committee members decide upon the acceptability of the candidate's dissertation. A favorable unanimous vote is required to approve the dissertation and all examiners are required to vote.

If the advisory committee accepts the dissertation for defense, the candidate appears before them for a final oral examination. This examination is open to all members of the faculty. The final oral examination will be limited to the subject of the candidate's dissertation and related matters. A favorable vote of the candidate's advisory committee and no more than one negative vote shall be required for passing the final oral examination. All committee members must vote. There shall be an announcement of the candidate's name, department and title of dissertation, together with the day, place and hour of the final oral examination at least 10 working days in advance.

## Electrical and Computer Engineering Track

### Admission requirements summary

#### Electrical and Computer Engineering Track

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall	Jul 1 (Feb 15 for financial assistance)	GRE
	Spring	Nov 15	

### Typical program of study - M.S. to Ph.D. in Engineering

	credits
Core component – Mfg. Systems and business/management (unless requirement met at master's level)	6
Concentration component - EGRE course work	6
Track electives – engineering or science course work	-
Directed research – ENGR 697	21
Total (minimum)	33

Students entering the doctoral program with a B.S. degree, but not the M.S., will require a minimum of 60 post baccalaureate credits (33 for M.S. level, including core courses, and an additional 27 for Ph.D. level).

### Typical program of study - B.S. to Ph.D. in Engineering

	credits
Core component – Mfg. Systems and business/management	6
Concentration component - EGRE course work	15
Track electives – engineering or science course work	6
Directed research – ENGR 697	33
Total (minimum)	60

A minimum of three years of study, including research, is necessary to

complete all requirements for the Ph.D. A period of residence of at least three consecutive semesters is required. Residency is defined as registration for at least nine credits per semester. A time limit of seven calendar years, beginning at the time of first registration, is placed on work to be credited toward the Ph.D.

### Curriculum

There are four components of each Ph.D. in Engineering.

**Core component.** This component emphasizes the study of manufacturing systems and business/management principles.

**Concentration (track-specific) component.** This component allows the student to pursue a series of courses that focus on a specific field of engineering and serve as the student's primary engineering discipline.

**Track electives component.** This component allows the student to take courses in either engineering or science with approval of the student's adviser.

**Directed research component.** This component emphasizes research directed toward completion of degree requirements under the direction of an adviser and advisory committee.

### Degree requirements

A minimum of 60 credit hours beyond the bachelor's degree, including research credits, is generally required for the Ph.D. in Engineering. Students holding the master's degree (and six credits of core course work) must complete a minimum of six semester credits in concentration course work and 21 semester credits in dissertation research. The student's adviser must approve all course work. Ph.D. students must take a minimum of 27 semester credits (including research) beyond the master's degree. In addition to conducting significant research, all engineering graduate students must complete course work in the two core areas of manufacturing and design (ENGR 501 or ENGR 502 or ENGR 565) and business and management (MGMT 641 or MGMT 655 or MGMT 540) unless credits were received for these courses (or equivalent courses) as part of the master's degree. No elective courses may be used for both M.S. and Ph.D. degrees. At least half of the credits required in the student's program must be those designated as exclusively for graduate students, that is those at the 600 level or above.

### Admission requirements

In addition to the general requirements for admission to graduate programs in the Graduate School and the School of Engineering, applicants to the electrical and computer engineering Track must have a B.S. degree in electrical and computer engineering or a closely related discipline.

Acceptance of an applicant is based upon the recommendation of the Admissions Committee with approval of the program chair and the assistant dean for graduate affairs.

### Registration

Students may begin a course of study in either the fall or spring semesters for the engineering graduate programs, although a start in the fall semester is preferred.

### Comprehensive examinations

In order to advance to doctoral candidacy, the student must pass both written and oral comprehensive examinations. The written examination(s) focuses on the subject matter deemed critical as a foundation in the program. The examination(s) is largely based on material covered in required course work and its application to theoretical and practical problems. The oral examination, which follows successful completion of the written examination(s), is administered to assess the ability of the student to integrate information and display an appropriate mastery of problem-solving capabilities. Graduate students may not take the comprehensive exam if their overall GPA is less than 3.0. Students must also have a GPA of at least 3.0 for courses within the program in order to take the comprehensive exam. For further details, see the graduate program director or the program chair.

### Admission to candidacy

Before admission to candidacy for the doctorate, students must have: (1) completed required course work, (2) successfully completed the comprehensive examinations and (3) fulfilled all additional departmental requirements. A student may seek admission to candidacy for the Doctor of Philosophy degree without first completing the research and thesis portion of the Master of Science degree.

### Dissertation research

The student must conduct a substantial original investigation under the supervision of the permanent adviser and prepare a dissertation reporting the results of this research and analyzing its significance in relation to existing scientific knowledge.

When the dissertation has been completed, copies in accepted form and style are submitted to the members of the advisory committee. The committee members decide upon the acceptability of the candidate's dissertation. A favorable unanimous vote is required to approve the dissertation and all examiners are required to vote.

If the advisory committee accepts the dissertation for defense, the candidate appears before them for a final oral examination. This examination is open to all members of the faculty. The final oral examination will be limited to the subject of the candidate's dissertation and related matters. A favorable vote of the candidate's advisory committee and no more than one negative vote shall be required for passing the final oral examination. All committee members must vote. There shall be an announcement of the candidate's name, department and title of dissertation, together with the day, place and hour of the final oral examination at least 10 working days in advance.

## Engineering Track

### Admission requirements summary

Engineering Track			
Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall	Jul 1 (Feb 15 for financial assistance)	GRE
	Spring	Nov 15	

### Typical program of study - M.S. to Ph.D. in Engineering

credits



Core component – Mfg. Systems and business/management (unless requirement met at master's level)	6
Concentration component - ENGR course work	6
Track electives – engineering or science course work	-
Directed research – ENGR 697	21
Total (minimum)	33

Students entering the doctoral program with a B.S. degree, but not the M.S., will require a minimum of 60 post baccalaureate credits (33 for M.S. level, including core courses, and an additional 27 for Ph.D. level).

### Typical program of study - B.S. to Ph.D. in Engineering

	credits
Core component – Mfg. Systems and business/management	6
Concentration component - ENGR course work	15
Track electives – engineering or science course work	6
Directed research – ENGR 697	33
Total (minimum)	60

A minimum of three years of study, including research, is necessary to complete all requirements for the Ph.D. A period of residence of at least three consecutive semesters is required. Residency is defined as registration for at least nine credits per semester. A time limit of seven calendar years, beginning at the time of first registration, is placed on work to be credited toward the Ph.D.

### Curriculum

There are four components of each Ph.D. in Engineering track.

**Core component.** This component emphasizes the study of manufacturing systems and business/management principles.

**Concentration (track-specific) component.** This component allows the student to pursue a series of courses that focus on a specific field of engineering and serve as the student's primary engineering discipline.

**Track electives component.** This component allows the student to take courses in either engineering or science with approval of the student's adviser.

**Directed research component.** This component emphasizes research directed toward completion of degree requirements under the direction of an adviser and advisory committee.

### Degree requirements

A minimum of 60 credit hours beyond the bachelor's degree, including research credits, is generally required for the Ph.D. in Engineering. Students holding the master's degree (and six credits of core course work) must complete a minimum of six semester credits in concentration course work and 21 semester credits in dissertation research. The student's adviser must approve all course work. Ph.D. students must take a minimum of 27 semester credits (including research) beyond the master's degree. In addition to conducting significant research, all engineering graduate students must complete course work in the two core areas of manufacturing and design (ENGR 501 or ENGR 502 or ENGR 565) and business and management (MGMT 641 or MGMT 655 or MGMT 540) unless credits were received for these courses (or equivalent courses) as part of the master's degree. No elective courses may be used for both M.S. and Ph.D. degrees. At least half of the credits required in the student's program must be those designated as exclusively for graduate students, that is those at the 600 level or above.

### Admission requirements

In addition to the general requirements for admission to graduate programs in the Graduate School and the School of Engineering, applicants to the engineering track must have a B.S. degree in engineering or a closely related discipline.

Acceptance of an applicant is based upon the recommendation of the Admissions Committee with approval of the program chair and the assistant dean for graduate affairs.

### Registration

Students may begin a course of study in either the fall or spring semesters for the engineering graduate programs, although a start in the fall semester is preferred.

### Comprehensive examinations

In order to advance to doctoral candidacy, the student must pass both written and oral comprehensive examinations. The written examination(s) focuses on the subject matter deemed critical as a foundation in the program. The examination(s) is largely based on material covered in required course work and its application to theoretical and practical problems. The oral examination, which follows successful completion of the written examination(s), is administered to assess the ability of the student to integrate information and display an appropriate mastery of problem-solving capabilities. Graduate students may not take the comprehensive exam if their overall GPA is less than 3.0. Students must also have a GPA of at least 3.0 for courses within the program in order to take the comprehensive exam. For further details, see the graduate program director or the program chair.

### Admission to candidacy

Before admission to candidacy for the doctorate, students must have: (1) completed required course work, (2) successfully completed the comprehensive examinations and (3) fulfilled all additional departmental requirements. A student may seek admission to candidacy for the Doctor of Philosophy degree without first completing the research and thesis portion of the Master of Science degree.

### Dissertation research

The student must conduct a substantial original investigation under the supervision of the permanent adviser and prepare a dissertation reporting the results of this research and analyzing its significance in relation to existing scientific knowledge.

When the dissertation has been completed, copies in accepted form and style are submitted to the members of the advisory committee. The committee members decide upon the acceptability of the candidate's dissertation. A favorable unanimous vote is required to approve the dissertation and all examiners are required to vote.

If the advisory committee accepts the dissertation for defense, the candidate appears before them for a final oral examination. This examination is open to all members of the faculty. The final oral examination will be limited to the subject of the candidate's dissertation and related matters. A favorable vote of the candidate's advisory committee and no more than one negative vote shall be required for passing the final oral examination. All committee members must vote.

There shall be an announcement of the candidate's name, department and title of dissertation, together with the day, place and hour of the final oral examination at least 10 working days in advance.

## Mechanical Engineering Track

### Admission requirements summary

#### Mechanical Engineering Track

Degree:	Semester(s)	Deadline	Test
of entry:	dates:	requirements:	
Ph.D.	Fall	Jul 1	GRE
		(Feb 15	
		for financial	
		assistance)	
	Spring	Nov 15	

### Typical program of study - M.S. to Ph.D. in Engineering

	credits
Core component – Mfg. Systems and business/management (unless requirement met at master's level)	6
Concentration component - EGRM course work	6
Track electives – engineering or science course work	-
Directed research – ENGR 697	21
Total (minimum)	33

Students entering the doctoral program with a B.S. degree, but not the M.S., will require a minimum of 60 post baccalaureate credits (33 for M.S. level, including core courses, and an additional 27 for Ph.D. level).

### Typical program of study - B.S. to Ph.D. in Engineering

	credits
Core component – Mfg. Systems and business/management	6
Concentration component - EGRM course work	15
Track electives – engineering or science course work	6
Directed research – ENGR 697	33
Total (minimum)	60

A minimum of three years of study, including research, is necessary to complete all requirements for the Ph.D. A period of residence of at least three consecutive semesters is required. Residency is defined as registration for at least nine credits per semester. A time limit of seven calendar years, beginning at the time of first registration, is placed on work to be credited toward the Ph.D.

#### Curriculum

There are four components of each Ph.D. in Engineering track.

**Core component.** This component emphasizes the study of manufacturing systems and business/management principles.

**Concentration (track-specific) component.** This component allows the student to pursue a series of courses that focus on a specific field of engineering and serve as the student's primary engineering discipline.

**Track electives component.** This component allows the student to take courses in either engineering or science with approval of the student's adviser.

**Directed research component.** This component emphasizes research

directed toward completion of degree requirements under the direction of an adviser and advisory committee.

#### Degree requirements

A minimum of 60 credit hours beyond the bachelor's degree, including research credits, is generally required for the Ph.D. in Engineering. Students holding the master's degree (and six credits of core course work) must complete a minimum of six semester credits in concentration course work and 21 semester credits in dissertation research. The student's adviser must approve all course work. Ph.D. students must take a minimum of 27 semester credits (including research) beyond the master's degree. In addition to conducting significant research, all engineering graduate students must complete course work in the two core areas of manufacturing and design (ENGR 501 or ENGR 502 or ENGR 565) and business and management (MGMT 641 or MGMT 655 or MGMT 540) unless credits were received for these courses (or equivalent courses) as part of the master's degree. No elective courses may be used for both M.S. and Ph.D. degrees. At least half of the credits required in the student's program must be those designated as exclusively for graduate students, that is those at the 600 level or above.

#### Admission requirements

In addition to the general requirements for admission to graduate programs in the Graduate School and the School of Engineering, applicants to the mechanical engineering track must have a B.S. degree in mechanical engineering or a closely related discipline.

Acceptance of an applicant is based upon the recommendation of the Admissions Committee with approval of the program chair and the assistant dean for graduate affairs.

#### Registration

Students may begin a course of study in either the fall or spring semesters for the engineering graduate programs, although a start in the fall semester is preferred.

#### Comprehensive examinations

In order to advance to doctoral candidacy, the student must pass both written and oral comprehensive examinations. The written examination(s) focuses on the subject matter deemed critical as a foundation in the program. The examination(s) is largely based on material covered in required course work and its application to theoretical and practical problems. The oral examination, which follows successful completion of the written examination(s), is administered to assess the ability of the student to integrate information and display an appropriate mastery of problem-solving capabilities. Graduate students may not take the comprehensive exam if their overall GPA is less than 3.0. Students must also have a GPA of at least 3.0 for courses within the program in order to take the comprehensive exam. For further details, see the graduate program director or the program chair.

#### Admission to candidacy

Before admission to candidacy for the doctorate, students must have: (1) completed required course work, (2) successfully completed the comprehensive examinations and (3) fulfilled all additional departmental requirements. A student may seek admission to candidacy for the Doctor of Philosophy degree without first completing the research and thesis

portion of the Master of Science degree.

#### Dissertation research

The student must conduct a substantial original investigation under the supervision of the permanent adviser and prepare a dissertation reporting the results of this research and analyzing its significance in relation to existing scientific knowledge.

When the dissertation has been completed, copies in accepted form and style are submitted to the members of the advisory committee. The committee members decide upon the acceptability of the candidate's dissertation. A favorable unanimous vote is required to approve the dissertation and all examiners are required to vote.

If the advisory committee accepts the dissertation for defense, the candidate appears before them for a final oral examination. This examination is open to all members of the faculty. The final oral examination will be limited to the subject of the candidate's dissertation and related matters. A favorable vote of the candidate's advisory committee and no more than one negative vote shall be required for passing the final oral examination. All committee members must vote. There shall be an announcement of the candidate's name, department and title of dissertation, together with the day, place and hour of the final oral examination at least 10 working days in advance.

## Engineering, Master of Science (M.S.)

### Admission requirements summary

#### Engineering, Master of Science (M.S.)

Degree:	Semester(s)	Deadline	Test
	of entry:	dates:	requirements:
M.S.	Fall	Jul 1 (Feb 1 for financial assistance)	GRE
	Spring	Nov 15	

The School of Engineering offers the Master of Science in Engineering degree with either a thesis or non-thesis option in four tracks. The engineering program utilizes the faculty and research facilities of the Department of Computer Science as well as those of the departments of Chemical and Life Science Engineering, Electrical and Computer Engineering, and Mechanical Engineering to expose students to advanced and emerging technologies. Research thrusts in the School of Engineering include computer science, life sciences, micro-nano technology, and manufacturing and design. Engineering M.S. and Ph.D. degrees are interdisciplinary and provide a wide array of specialization areas including microelectronics, silicon fabrication, VLSI design, networks, embedded systems, image/signal processing, photonics/optical electronics, neural networks, MEMS, digital communications, micro-nanotechnology, smart materials and devices, robotics, manufacturing and design, polymers, biochips, biochemical and biological engineering, fuel cells, software engineering, parallel processing, databases, compiler theory, machine learning, and artificial intelligence. These areas cross the discipline lines of computer science, chemical, electrical, and mechanical engineering.

For students who want to study and conduct research in these areas or related areas, the following tracks are available:

- Chemical and life science engineering track (CLSE)
- Electrical and computer engineering track (EGRE)

- Mechanical engineering track (EGRM)
- Engineering track (ENGR)

Each track can be tailored to meet the individual student's academic goals and research interests. Non-thesis and thesis students seeking to take course work or conduct their thesis/study research in one of these tracks should contact the graduate program coordinator or program chair of the desired track for more information about that track. Eighteen to 20 months of study usually are necessary to complete the requirements for the thesis-option Master of Science in Engineering degree. The non-thesis option generally requires 12 months of full-time study or up to five years of part-time study. A time limit of five calendar years, beginning at the time of first registration, is placed on work to be credited toward the Master of Science degree. Generally, a maximum of six credits of approved graduate course work required for a master's degree may be transferred from another program at VCU or outside institution and applied toward the degree.

### General requirements

#### Assistantships

A number of full or partial teaching and research assistantships are available in the engineering, biomedical engineering and computer science programs. Assistantships are awarded based on academic performance. Full support assistantships are for a 12-month period and cover tuition, fees and a stipend. A brief description of financial aid based on demonstrated need is detailed in the chapter of this bulletin regarding financial aid. Need-based aid programs include National Direct Student Loan, college work-study and institutional loans.

#### The student adviser and the advisory committee

The successful completion of the requirements for both the M.S. includes an original research project, the progress of which is guided by a faculty adviser and monitored by an advisory committee. Students receive guidance and counsel from the graduate program director prior to the appointment of the permanent adviser. The permanent adviser holds the primary responsibility for directing the development of the student in the program and providing the appropriate guidance and counsel essential to the scholarly development of the student. An advisory committee, appointed shortly after the permanent adviser is appointed, serves as both an examining and consultative body. Its function is to assist the development of the student. Committee members hold a special responsibility as a source of counsel for the student. For details, students should contact either the respective graduate program director or the program chair.

#### Graduate degree requirements

All full-time graduate students are expected to register for a minimum of 12 hours of graduate credits per semester and at least one semester hour during the summer, exclusive of audited courses. This requirement includes research.

At least half of the credits required in the student's program must be those designated as exclusively for graduate students; that is, those at the 600 level or above.

Graduate students are required to remain in good academic standing through the course of their degree program. Unsatisfactory student performance includes:

- the assignment of a grade of "U," "D" or "F" in any course.

- failure to maintain a cumulative GPA of 3.0 or greater.
- failure to pass the written or oral comprehensive examination.
- failure to pass the final examination.

A student whose performance is unsatisfactory must successfully petition the dean of the Graduate School to continue in the graduate program. Unsatisfactory performance also constitutes grounds for the termination of financial assistance to the student.

Students may not take the final oral examination for the M.S. degree if their overall GPA is below 3.0. The student's advisory committee is the examining body for the administration of the final examination. In addition to these requirements and those set forth by the university, students must meet the requirements for specific degrees set forth in the School of Engineering program listings.

#### Enrollment information

#### Nondegree-seeking students

Students not admitted to a degree program must obtain permission from the program director and chair before being allowed to register for courses.

#### Termination of enrollment

The university reserves the right to terminate the enrollment of any student for unlawful, disorderly or immoral conduct or for persistent failure to fulfill the purposes for which the student was matriculated.

### Chemical and Life Science Engineering Track

	credits
Core component – Mfg. Systems and business/management	6
Concentration component – CLSE course work	9
Track electives – engineering or science course work	6
Directed research – CLSE 697	12
Total (minimum)	33

#### Curriculum

There are four components of each M.S. in Engineering track:

**Core component.** This component emphasizes the study of manufacturing systems and business/management principles.

**Concentration (track-specific) component.** This component allows the student to pursue a series of courses that focus on a specific field of engineering and serve as the student's primary engineering discipline.

**Track electives component.** This component allows the student to take courses in either engineering or science with approval of the student's adviser.

**Directed research component.** This component emphasizes research directed toward completion of degree requirements under the direction of an adviser and advisory committee.

The track can be tailored to meet the individual student's academic goals and research interests. Students seeking to take course work and conduct their research in the chemical and life science engineering track should contact the graduate program coordinator or department chair of Chemical and Life Science Engineering for detailed information about that track.

#### Degree requirements

Students seeking the M.S. degree are required to take a minimum of 33 semester credits of approved graduate courses (including research). Each student must complete nine semester credits in concentration course work, six semester credits in track electives course work, and 12 semester credits in thesis research. The student's adviser must review and approve all course work and thesis research credits. The total of all credits must be at least 33. In addition to conducting significant research, all engineering graduate students must complete course work in the two core areas of manufacturing and design (ENGR 501, ENGR 502 or ENGR 565) and business and management (MGMT 641, MGMT 655 or MGMT 540). No elective courses may be used for both M.S. and Ph.D. degrees. At least half of the credits required in the student's program must be those designated as exclusively for graduate students, that is those at the 600 level or above.

Each student must conduct an original investigation under the supervision of the permanent adviser and prepare a thesis reporting the results of this research and analyzing its significance in relation to existing scientific knowledge. This study is reported in a thesis prepared in acceptable form and style. Upon approval of the thesis by the adviser, the student submits a copy to each member of the advisory committee. The student's advisory committee members examine the thesis and decide upon its acceptability. Each committee member reports to the student's adviser when the thesis is acceptable for defense. The thesis is approved for defense only if accepted unanimously. Upon approval of the thesis, the student appears for a final oral examination administered by the student's advisory committee. This examination of an M.S. candidate includes the subject matter of course work as well as the thesis.

#### Admission requirements

In addition to the general requirements for admission to graduate programs in the Graduate School and the School of Engineering, applicants to the chemical and life science engineering track must have a B.S. degree in chemical and life science engineering or a closely related discipline.

#### Registration

Students may begin a course of study in either the fall or spring semesters for the engineering programs, although a start in the fall semester is preferred.

### Electrical and Computer Engineering Track

	credits
Core component – Mfg. Systems and business/management	6
Concentration component – EGRE course work	9
Track electives – engineering or science course work	6
Directed research – ENGR 697	12
Total (minimum)	33

#### Curriculum

There are four components of each M.S. in Engineering track:

**Core component.** This component emphasizes the study of manufacturing systems and business/management principles.

**Concentration (track-specific) component.** This component allows the student to pursue a series of courses that focus on a specific field of engineering and serve as the student's primary engineering discipline.

**Track electives component.** This component allows the student to take courses in either engineering or science with approval of the student's adviser.

**Directed research component.** This component emphasizes research directed toward completion of degree requirements under the direction of an adviser and advisory committee.

The track can be tailored to meet the individual student's academic goals and research interests. Students seeking to take course work and conduct their research in the electrical and computer engineering track should contact the graduate program coordinator or department chair of Electrical and Computer Engineering for detailed information about that track.

#### Degree requirements

Students seeking the M.S. degree are required to take a minimum of 33 semester credits of approved graduate courses (including research). Each student must complete nine semester credits in concentration course work, six semester credits in track electives course work, and 12 semester credits in thesis research. The student's adviser must review and approve all course work and thesis research credits. The total of all credits must be at least 33. In addition to conducting significant research, all engineering graduate students must complete course work in the two core areas of manufacturing and design (ENGR 501, ENGR 502 or ENGR 565) and business and management (MGMT 641, MGMT 655 or MGMT 540). No or elective courses may be used for both M.S. and Ph.D. degrees. At least half of the credits required in the student's program must be those designated as exclusively for graduate students, that is those at the 600 level or above.

Each student must conduct an original investigation under the supervision of the permanent adviser and prepare a thesis reporting the results of this research and analyzing its significance in relation to existing scientific knowledge. This study is reported in a thesis prepared in acceptable form and style. Upon approval of the thesis by the adviser, the student submits a copy to each member of the advisory committee. The student's advisory committee members examine the thesis and decide upon its acceptability. Each committee member reports to the student's adviser when the thesis is acceptable for defense. The thesis is approved for defense only if accepted unanimously. Upon approval of the thesis, the student appears for a final oral examination administered by the student's advisory committee. This examination of an M.S. candidate includes the subject matter of course work as well as the thesis.

#### Admission requirements

In addition to the general requirements for admission to graduate programs in the Graduate School and the School of Engineering, applicants to the electrical and computer engineering track must have a B.S. degree in electrical and computer engineering or a closely related discipline.

#### Registration

Students may begin a course of study in either the fall or spring semesters for the engineering programs, although a start in the fall semester is preferred.

Core component – Mfg. Systems and business/management 6

Concentration component – ENGR course work 9

Track electives – engineering or science course work 6

Directed research – ENGR 697 12

Total (minimum) 33

#### Curriculum

There are four components of each M.S. in Engineering track:

**Core component.** This component emphasizes the study of manufacturing systems and business/management principles.

**Concentration (track-specific) component.** This component allows the student to pursue a series of courses that focus on a specific field of engineering and serve as the student's primary engineering discipline.

**Track electives component.** This component allows the student to take courses in either engineering or science with approval of the student's adviser.

**Directed research component.** This component emphasizes research directed toward completion of degree requirements under the direction of an adviser and advisory committee.

The track can be tailored to meet the individual student's academic goals and research interests. Students seeking to take course work and conduct their research in the engineering track should contact the graduate program coordinator or department chair of Engineering for detailed information about that track.

#### Degree requirements

Students seeking the M.S. degree are required to take a minimum of 33 semester credits of approved graduate courses (including research). Each student must complete nine semester credits in concentration course work, six semester credits in track electives course work, and 12 semester credits in thesis research. The student's adviser must review and approve all course work and thesis research credits. The total of all credits must be at least 33. In addition to conducting significant research, all engineering graduate students must complete course work in the two core areas of manufacturing and design (ENGR 501, ENGR 502 or ENGR 565) and business and management (MGMT 641, MGMT 655 or MGMT 540). No elective courses may be used for both M.S. and Ph.D. degrees. At least half of the credits required in the student's program must be those designated as exclusively for graduate students, that is those at the 600 level or above.

Each student must conduct an original investigation under the supervision of the permanent adviser and prepare a thesis reporting the results of this research and analyzing its significance in relation to existing scientific knowledge. This study is reported in a thesis prepared in acceptable form and style. Upon approval of the thesis by the adviser, the student submits a copy to each member of the advisory committee. The student's advisory committee members examine the thesis and decide upon its acceptability. Each committee member reports to the student's adviser when the thesis is acceptable for defense. The thesis is approved for defense only if accepted unanimously. Upon approval of the thesis, the student appears

## Engineering Track

credits

for a final oral examination administered by the student's advisory committee. This examination of an M.S. candidate includes the subject matter of course work as well as the thesis.

#### Admission requirements

In addition to the general requirements for admission to graduate programs in the Graduate School and the School of Engineering, applicants to the engineering track must have a B.S. degree in engineering or a closely related discipline.

#### Registration

Students may begin a course of study in either the fall or spring semesters for the engineering programs, although a start in the fall semester is preferred.

### Mechanical Engineering Track

	credits
Core component – Mfg. Systems and business/management	6
Concentration component – EGRM course work	9
Track electives – engineering or science course work	6
Directed research – ENGR 697	12
Total (minimum)	33

#### Curriculum

There are four components of each M.S. in Engineering track:

**Core component.** This component emphasizes the study of manufacturing systems and business/management principles.

**Concentration (track-specific) component.** This component allows the student to pursue a series of courses that focus on a specific field of engineering and serve as the student's primary engineering discipline.

**Track electives component.** This component allows the student to take courses in either engineering or science with approval of the student's adviser.

**Directed research component.** This component emphasizes research directed toward completion of degree requirements under the direction of an adviser and advisory committee.

The track can be tailored to meet the individual student's academic goals and research interests. Students seeking to take course work and conduct their research in the mechanical engineering track should contact the graduate program coordinator or department chair of Mechanical Engineering for detailed information about that track.

#### Degree requirements

Students seeking the M.S. degree are required to take a minimum of 33 semester credits of approved graduate courses (including research). Each student must complete nine semester credits in concentration course work, six semester credits in track electives course work, and 12 semester credits in thesis research. The student's adviser must review and approve all course work and thesis research credits. The total of all credits must be at least 33. In addition to conducting significant research, all engineering graduate students must complete course work in the two core areas of manufacturing and design (ENGR 501, ENGR 502 or ENGR 565) and business and management (MGMT 641, MGMT 655 or MGMT 540). No

elective courses may be used for both M.S. and Ph.D. degrees. At least half of the credits required in the student's program must be those designated as exclusively for graduate students, that is those at the 600 level or above.

Each student must conduct an original investigation under the supervision of the permanent adviser and prepare a thesis reporting the results of this research and analyzing its significance in relation to existing scientific knowledge. This study is reported in a thesis prepared in acceptable form and style. Upon approval of the thesis by the adviser, the student submits a copy to each member of the advisory committee. The student's advisory committee members examine the thesis and decide upon its acceptability. Each committee member reports to the student's adviser when the thesis is acceptable for defense. The thesis is approved for defense only if accepted unanimously. Upon approval of the thesis, the student appears for a final oral examination administered by the student's advisory committee. This examination of an M.S. candidate includes the subject matter of course work as well as the thesis.

#### Admission requirements

In addition to the general requirements for admission to graduate programs in the Graduate School and the School of Engineering, applicants to the mechanical engineering track must have a B.S. degree in mechanical engineering or a closely related discipline.

#### Registration

Students may begin a course of study in either the fall or spring semesters for the engineering programs, although a start in the fall semester is preferred.

### Non-thesis option – Chemical and Life Science Engineering Track

	credits
Core component – Business/management	3
Concentration component – CLSE course work	15
Track electives – engineering or science course work	15
Total (minimum)	33

#### Curriculum

There are three components of non-thesis M.S. in Engineering track:

**Core component.** This component emphasizes the study of business/management principles.

**Concentration (track-specific) component.** This component allows the student to pursue a series of courses that focus on a specific field of engineering and serve as the student's primary engineering discipline.

**Track electives component.** This component allows the student to take courses in either engineering or science with approval of the student's adviser.

The track can be tailored to meet the individual student's academic goals and research interests. Students seeking to take course work and conduct their research in the chemical and life science engineering track should contact the graduate program coordinator or department chair of Chemical and Life Science Engineering for detailed information about that track.

#### Degree requirements

Students seeking the non-thesis M.S. degree are required to take a minimum of 33 semester credits of approved graduate courses. Each student must complete 15 semester credits in concentration course work and 15 semester credits in track electives course work.

The M.S. in Engineering – non-thesis option student is expected to earn a minimum of three core course semester credits in business/management (MGMT 641, MGMT 655 or MGMT 540). A manufacturing/design course will be required of students who have no experience in a business/industry setting. Each non-thesis student must have a plan of study by the end of the first semester or prior to completing nine credits. This plan of study (and all revisions) must be approved by the student's adviser and the assistant dean for graduate affairs of the School of Engineering. The student's adviser must review/approve all course work in advance of enrollment. At least half the credits required in the student's program must be designated as 600 level or above.

#### Admission requirements

In addition to the general requirements for admission to graduate programs in the Graduate School and the School of Engineering, applicants to the chemical and life science engineering track must have a B.S. degree in chemical and life science engineering or a closely related discipline.

#### Registration

Students may begin a course of study in either the fall or spring semesters for the engineering programs, although a start in the fall semester is preferred.

### Non-thesis option – Electrical and Computer Engineering Track

	credits
Core component – Business/management	3
Concentration component – EGRE course work	15
Track electives – engineering or science course work	15
Total (minimum)	33

#### Curriculum

There are three components of each non-thesis M.S. in Engineering track:

**Core component.** This component emphasizes the study of business/management principles.

**Concentration (track-specific) component.** This component allows the student to pursue a series of courses that focus on a specific field of engineering and serve as the student's primary engineering discipline.

**Track electives component.** This component allows the student to take courses in either engineering or science with approval of the student's adviser.

The track can be tailored to meet the individual student's academic goals and research interests. Students seeking to take course work and conduct their research in the electrical and computer engineering track should contact the graduate program coordinator or department chair of Electrical and Computer Engineering for detailed information about that track.

#### Degree requirements

Students seeking the non-thesis M.S. degree are required to take a

minimum of 33 semester credits of approved graduate courses. Each student must complete 15 semester credits in concentration course work and 15 semester credits in track electives course work.

The M.S. in Engineering – non-thesis option student is expected to earn a minimum of three core course semester credits in business/management (MGMT 641, MGMT 655 or MGMT 540). A manufacturing/design course will be required of students who have no experience in a business/industry setting. Each non-thesis student must have a plan of study by the end of the first semester or prior to completing nine credits. This plan of study (and all revisions) must be approved by the student's adviser and the assistant dean for graduate affairs of the School of Engineering. The student's adviser must review/approve all course work in advance of enrollment. At least half the credits required in the student's program must be designated as 600 level or above.

#### Admission requirements

In addition to the general requirements for admission to graduate programs in the Graduate School and the School of Engineering, applicants to the electrical and computer engineering track must have a B.S. degree in electrical and computer science engineering or a closely related discipline.

#### Registration

Students may begin a course of study in either the fall or spring semesters for the engineering programs, although a start in the fall semester is preferred.

### Non-thesis option – Engineering Track

	credits
Core component – Business/management	3
Concentration component – ENGR course work	15
Track electives – engineering or science course work	15
Total (minimum)	33

#### Curriculum

There are three components of each non-thesis M.S. track in Engineering track:

**Core component.** This component emphasizes the study of business/management principles.

**Concentration (track-specific) component.** This component allows the student to pursue a series of courses that focus on a specific field of engineering and serve as the student's primary engineering discipline.

**Track electives component.** This component allows the student to take courses in either engineering or science with approval of the student's adviser.

The track can be tailored to meet the individual student's academic goals and research interests. Students seeking to take course work and conduct their research in the engineering track should contact the appropriate graduate program coordinator or department chair of Engineering for detailed information about that track.

#### Degree requirements

Students seeking the non-thesis M.S. degree are required to take a minimum of 33 semester credits of approved graduate courses. Each



student must complete 15 semester credits in concentration course work and 15 semester credits in track electives course work.

The M.S. in Engineering – non-thesis option student is expected to earn a minimum of three core course semester credits in business/management (MGMT 641, MGMT 655 or MGMT 540). A manufacturing/design course will be required of students who have no experience in a business/industry setting. Each non-thesis student must have a plan of study by the end of the first semester or prior to completing nine credits. This plan of study (and all revisions) must be approved by the student's adviser and the assistant dean for graduate affairs of the School of Engineering. The student's adviser must review/approve all course work in advance of enrollment. At least half the credits required in the student's program must be designated as 600 level or above.

#### Admission requirements

In addition to the general requirements for admission to graduate programs in the Graduate School and the School of Engineering, applicants to the engineering track must have a B.S. degree in engineering, or a closely related discipline.

#### Registration

Students may begin a course of study in either the fall or spring semesters for the engineering programs, although a start in the fall semester is preferred.

### Non-thesis option – Mechanical Engineering Track

	credits
Core component – Business/management	3
Concentration component – EGRM course work	15
Track electives – engineering or science course work	15
Total (minimum)	33

#### Curriculum

There are three components of each non-thesis M.S. in Engineering track:

**Core component.** This component emphasizes the study of business/management principles.

**Concentration (track-specific) component.** This component allows the student to pursue a series of courses that focus on a specific field of engineering and serve as the student's primary engineering discipline.

**Track electives component.** This component allows the student to take courses in either engineering or science with approval of the student's adviser.

The track can be tailored to meet the individual student's academic goals and research interests. Students seeking to take course work and conduct their research in the mechanical engineering track should contact the graduate program coordinator or department chair of Mechanical Engineering for detailed information about that track.

#### Degree requirements

Students seeking the non-thesis M.S. degree are required to take a minimum of 33 semester credits of approved graduate courses. Each student must complete 15 semester credits in concentration course work and 15 semester credits in track electives course work.

The M.S. in Engineering – non-thesis option student is expected to earn a minimum of three core course semester credits in business/management (MGMT 641, MGMT 655 or MGMT 540). A manufacturing/design course will be required of students who have no experience in a business/industry setting. Each non-thesis student must have a plan of study by the end of the first semester or prior to completing nine credits. This plan of study (and all revisions) must be approved by the student's adviser and the assistant dean for graduate affairs of the School of Engineering. The student's adviser must review/approve all course work in advance of enrollment. At least half the credits required in the student's program must be designated as 600 level or above.

#### Admission requirements

In addition to the general requirements for admission to graduate programs in the Graduate School and the School of Engineering, applicants to the mechanical engineering track must have a B.S. degree in mechanical engineering or a closely related discipline.

#### Registration

Students may begin a course of study in either the fall or spring semesters for the engineering programs, although a start in the fall semester is preferred.

## Department of Biomedical Engineering

The biomedical engineering program offers both the Master of Science and the Doctor of Philosophy degrees. Biomedical engineering provides in-depth study in a variety of specialization areas including biomedical imaging systems, orthopedic biomechanics, tissue and cellular engineering, biomaterials, artificial organs, human-computer interfaces, cardiovascular devices and rehabilitation engineering. The program allows students to participate in cutting-edge research in one of the nations most advanced engineering programs. Biomedical engineering has ongoing collaborations with numerous industries, federal laboratories, the VCU science departments, the university's MCV Campus, the Hunter Holmes McGuire Veterans Affairs Medical Center, the Virginia BioTechnology Research Park, and numerous biomedical and clinical programs throughout the VCU Health System's MCV Hospitals.

#### Administration

**Gerald E. Miller**  
Professor and Department Chair

### Biomedical Engineering, Doctor of Philosophy (Ph.D.)

#### Admission requirements summary

##### Biomedical Engineering, Doctor of Philosophy (Ph.D.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall Spring	Feb 15 Nov 15	GRE

**Special requirements:**  
Contact department for brochure

This program is nominally a three-year program leading to the Ph.D. in Biomedical Engineering. Prior evidence of completion of physiology and/or

statistics may result in a waiver of the requirements for these courses as determined by the graduate program coordinator and/or the department chair. A period of residence of at least three consecutive terms is required. Residency is defined as registration for at least nine credits per term. A time limit of seven calendar years, beginning at the time of first registration, is placed on work to be credited toward the Doctor of Philosophy degree.

At the conclusion of the first year of doctoral study (or when the core course requirements have been satisfied), each doctoral student must successfully complete written and oral portions of a comprehensive examination. This examination is designed to test the student on fundamental knowledge in engineering as evidenced by the core (and related elective) courses within the curriculum. Upon completion of this examination, a doctoral student is permitted to initiate a doctoral research project and to complete additional course work consisting of biomedical engineering, clinical and science electives.

Upon completion of all course work and the intended research, a doctoral student must prepare a dissertation describing the completed research. A dissertation defense, under the direction of the advisory committee, will be scheduled to examine the students research, dissertation documentation, and underlying fundamental knowledge needed to complete the research. Upon successful completion of the defense and dissertation, the doctoral student may apply for graduation from Virginia Commonwealth University with the Doctor of Philosophy in Biomedical Engineering.

## Admission requirements

In addition to the university admission requirements, biomedical engineering has the following admission criteria for all entering graduate students (for both M.S. and Ph.D. applicants):

- Minimum GPA of at least 3.0 for all graduate credit hours
- Minimum GRE score of 1100 (combined verbal and quantitative sections) including a minimum 600 on the quantitative section
- Minimum TOEFL score of 600 paper/250 computer-based for students whose first or native language is not English.

Biomedical engineering will accept a maximum of six credit hours for transfer into Ph.D. program if the original grades for such courses are "B" or higher (or equivalent).

Acceptance of an applicant is based upon the recommendation of the Admissions Committee with approval of the program chair and the assistant dean for graduate affairs.

## Registration

In the biomedical engineering program, all new students begin their course of study in the fall semester (August). Spring semester admissions require the recommendation of the graduate program director, approval of the chair and the assistant dean for graduate affairs. Students may begin a course of study in either the fall or spring semesters for the engineering and computer science graduate programs, although a start in the fall semester is preferred. For the CGEP, students may begin a course of study in either the fall or spring semester.

## Comprehensive examinations

In order to advance to doctoral candidacy, the student must pass both written and oral comprehensive examinations. The written examination(s) focuses on the subject matter deemed critical as a foundation in the program. The examination(s) is largely based on material covered in required course work and its application to theoretical and practical problems. The oral examination, which follows successful completion of

the written examination(s), is administered to assess the ability of the student to integrate information and display an appropriate mastery of problem-solving capabilities. Graduate students may not take the comprehensive exam if their overall GPA or is less than 3.0. or if their GPA for courses within the program is below 3.0. Students must also have a GPA of at least 3.0 for courses within the program in order to take the comprehensive exam. For further details, see the graduate program director or the program chair.

## Honors

The Alexander Mallory Clarke Award for academic excellence is given each spring to the biomedical engineering student who is recognized by the faculty for outstanding achievement in the first year of study.

## Admission to candidacy

Before admission to candidacy for the doctorate, students must have: (1) completed required course work, (2) successfully completed the comprehensive examinations and (3) fulfilled all additional departmental requirements. Students must complete all the requirements for the master's degree, including successfully defending a master's thesis, before being admitted into candidacy for the doctoral degree. This last requirement will be waived for those students who: (1) already have a master of science in biomedical engineering or related discipline or (2) have successfully completed two years of medical school in the M.D./Ph.D. program as described in the School of Medicine chapter of this bulletin.

## Dissertation research

The student must conduct a substantial original investigation under the supervision of the permanent adviser and prepare a dissertation reporting the results of this research and analyzing its significance in relation to existing scientific knowledge.

When the dissertation has been completed, copies in accepted form and style are submitted to the members of the advisory committee. The committee members decide upon the acceptability of the candidate's dissertation. A favorable unanimous vote is required to approve the dissertation and all examiners are required to vote.

If the advisory committee accepts the dissertation for defense, the candidate appears before them for a final oral examination. This examination is open to all members of the faculty. The final oral examination will be limited to the subject of the candidate's dissertation and related matters. A favorable vote of the candidate's advisory committee and no more than one negative vote shall be required for passing the final oral examination. All committee members must vote. There shall be an announcement of the candidate's name, department and title of dissertation, together with the day, place and hour of the final oral examination at least 10 working days in advance.

## Curriculum

A minimum of 39 credit hours, exclusive of research credits, is generally required.

credits

Required biomedical engineering courses	12
EGRB 507 Biomedical Electronics and Instrumentation	
EGRB 603 Biomedical Signal Processing	
EGRB 511 Fundamentals of Biomechanics	
EGRB 613 Biomaterials	

Required courses in other departments Physiology and statistics	8
Elective courses (biomedical engineering or other area)	15
Research Seminar (Biomedical Engineering)	4
Directed Research (Biomedical Engineering)*	33
	_____
	minimum of 72

\* EGRB 697 Directed Research in Biomedical Engineering is required at a level to be determined by each student's graduate advisory committee, with 33 credits being the minimum requirement.

### Combined Doctor of Medicine (M.D.) and Doctor of Philosophy (Ph.D.)

The M.D./Ph.D. Program seeks to prepare physician-scientists for careers that encompass aspects of health care ranging from the discipline of basic investigation to patient care. The program begins two months prior to the first year of medical school. These students arrive on campus for orientation and complete two laboratory rotations before the start of medical school classes. They complete the first two years of medical school and, after taking the first part of the U.S. National Medical Licensing Examination, enter a Ph.D.-granting department as a graduate student. Each student must meet the Ph.D. requirements of his or her department for course work, examinations and research. Many of the medical school courses will provide credits for the graduate phase, but students also must take additional graduate-level courses as determined by the dissertation adviser and advisory committee. The main undertaking at this phase is laboratory research that leads to the Ph.D. dissertation. After completion of doctoral degree requirements, students move to the clinical year of medical school. Students may begin their clinical year of medical school immediately after completion of doctoral (Ph.D.) requirements, regardless of the time in the calendar year, and, 14 months later, may complete their medical school requirements. These students are exempt from the major part of the fourth year of medical school.

Prospective students submit applications through the American Medical College Application Service. Upon review of the AMCAS documents, qualified applicants are sent supplemental admission materials, including an application for the M.D./Ph.D. Program. Those invited to Richmond for interviews will take part in the standard interview for the School of Medicine and also will meet with the director of the M.D./Ph.D. Program and one or more academic members of the M.D./Ph.D. Committee.

Admission of medical students to the Ph.D. phase of training takes place formally following completion of the M-II year of M.D. training. A copy of the student file is transferred to the Office of Graduate Education and the individual is formally accepted to Ph.D. training by the VCU Graduate School.

The requirements for a combined professional school/graduate school degree in the School of Medicine are equivalent to those required of students seeking a graduate degree alone and are determined by the individual program. A time limit of seven calendar years for the Ph.D. degree, beginning at the time of first registration in the graduate school, applies to work to be credited toward degrees for students in combined programs.

For additional information, please see the program Web site at [www.vcu.edu/mdphd](http://www.vcu.edu/mdphd)

## Biomedical Engineering, Master of Science (M.S.)

### Admission requirements summary

#### Biomedical Engineering, Master of Science (M.S.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.	Fall Spring	Feb 15 Nov 15	GRE

#### Special requirements:

Contact department for brochure

This program is nominally a two-year program leading to the M.S. in Biomedical Engineering. Prior evidence of completion of physiology and/or statistics may result in a waiver of the requirements for these courses as determined by the graduate program coordinator and/or the department chair. Each Master of Science student must successfully complete a thesis describing his or her individualized research project. At the completion of the research, the student must present the research to the advisory committee and undergo an examination of the research results, thesis documentation and underlying educational foundation necessary to have successfully completed the research. Upon successful completion of the examination and thesis, the student may apply for graduation from Virginia Commonwealth University with the Master of Science in Biomedical Engineering.

### Admission requirements

In addition to the university admission requirements, biomedical engineering has the following admission criteria for all entering graduate students:

- Minimum GPA of at least 3.0 during the previous 60 credit hours (for applicants with a B.S.)
- Minimum GRE score of 1100 (combined verbal and quantitative sections) including a minimum 600 on the quantitative section
- Minimum TOEFL score of 600 paper/250 computer-based for students whose first or native language is not English.

Biomedical engineering will accept a maximum of six credit hours for transfer into either the M.S. program if the original grades for such courses are "B" or higher (or equivalent).

Acceptance of an applicant is based upon the recommendation of the Admissions Committee with approval of the program chair and the assistant dean for graduate affairs.

### Registration

In the biomedical engineering program, all new students begin their course of study in the fall semester (August). Spring semester admissions require the recommendation of the graduate program director, approval of the chair and the assistant dean for graduate affairs.

### Honors

The Alexander Mallory Clarke Award for academic excellence is given each spring to the biomedical engineering student who is recognized by the faculty for outstanding achievement in the first year of study.

## Curriculum

Students pursuing an M.S. in Biomedical Engineering must successfully complete a minimum of 28 credit hours exclusive of research credits.

Required biomedical engineering courses (minimum three of the following)	credits 9
EGRB 507 Biomedical Electronics and Instrumentation	
EGRB 603 Biomedical Signal Processing	
EGRB 511 Fundamentals of Biomechanics	
EGRB 613 Biomaterials	
Required courses in other departments	8
Physiology and Statistics	
Elective courses (biomedical engineering or other area)	9
Research Seminar (biomedical engineering)	2
(minimum)*	28

\* EGRB 697 Directed Research in Biomedical Engineering is required at a level to be determined by each student's advisory committee.

## Department of Chemical and Life Science Engineering

The Chemical and life science engineering Department prepares students for highly competitive, national placement in chemical and life science engineering employment or graduate study by anticipating and preparing for ever-broadening expectations and skills.

A chemical and life science engineering track is available in the Master of Science in Engineering as well as the Ph.D. in Engineering. This track is designed primarily for students who are interested in applying chemical and engineering principles toward important contemporary topics including process design, metabolic engineering, biosensor and biochip development, high-performance polymers in medicine and energy conversion, polymer surface science, and environmentally benign polymer processing technologies. Major emphasis is placed on chemical and life science engineering fundamentals with additional emphasis on applied chemistry and life sciences.

### Administration

**Michael Peters**  
Professor and Chair

## Department of Computer Science

The master's degree program emphasizes continuing self-development of individuals currently engaged in science-, technology- and engineering-related fields. It prepares persons who have completed undergraduate majors in these fields for entry into careers in areas that use computing technology. Both the theoretical and applied aspects of computer science are emphasized in this program. The program offers courses in a wide range of areas in computer science including artificial intelligence, theory of computation, computer architecture, software engineering, programming languages, database and computer graphics. These areas correspond to the research interests and specialization of the faculty in the computer science program. For the convenience of students with full time jobs, a full range of courses is offered both during the day and in the evening.

The Computer Science Ph.D. in Engineering track is designed primarily for students who are interested in advanced research in areas related to software engineering, networking, parallel processing, databases, compiler theory, machine learning and artificial intelligence. Emphasis in this track is placed on foundational issues as well as contemporary research areas such as human-machine interface design, the design and development of intelligent control systems, optical networks, the applicability of modal logic operations in databases, and transformations permitting the development of trusted compilers.

### Administration

**David Primeaux**  
Associate Professor and Chair

## Computer Science, Master of Science (M.S.)

### Admission requirements summary

#### Computer Science, Master of Science (M.S.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.	Fall Spring	Jul 1 Nov 15	GRE-General

#### Special requirements:

Contact coordinator of graduate studies for specific requirements

A student may choose either a thesis or non-thesis degree program. The thesis option is suggested for students who have a strong research interest or those who wish to pursue a Ph.D. degree. Interdisciplinary programs of study that involve computer science and another discipline are encouraged; however, a core of computer science courses is required. Courses not labeled CMSC must show relevance to the student's program of study and must be submitted for approval by the Computer Science Graduate Program Committee through the students adviser. At most, six non-CMSC credits may be applied toward the degree.

### Admission requirements

In addition to the general requirements for admission to graduate programs in the Graduate School and the School of Engineering, applicants to the master's program in computer science must have a B.S. degree in engineering, computer science or a closely related discipline.

Acceptance of an applicant is based upon the recommendation of the Admissions Committee with approval of the program chair and the assistant dean for graduate affairs.

### Registration

In the biomedical engineering program, all new students begin their course of study in the fall semester (August). Spring semester admissions require the recommendation of the graduate program director, approval of the chair and the assistant dean for graduate affairs. Students may begin a course of study in either the fall or spring semesters for the engineering and computer science graduate programs, although a start in the fall semester is preferred. For the CGEP, students may begin a course of study in either the fall or spring semester.

### Non-thesis option

**M.S. requirements in computer science – Non-thesis option (33 credits):**

A minimum of 33 credits, including at least 18 credits at the 600 level.

Courses that are transferred are subject to the following rules. These credits must not have been applied to any other degree; however, they may have been taken as part of a postbaccalaureate certificate program.

No more than six credits in graduate-level courses taken at VCU before admission to the M.S. program may be counted toward the M.S. degree.

Up to one-third of a student's non-research graduate-level credits can be transferred into the M.S. program from another college or university.

The number of credits that may be transferred by students pursuing an M.S. in Computer Science through the Commonwealth Graduate Engineering Program (CGEP) is limited by CGEP policy to 50 percent of the required credits.

All transfer credits must be approved by the Computer Science Graduate Program Committee using the graduate course transfer form.

Students seeking to take a research credit course (CMSC 692 Independent Study or CMSC 697 Directed Research) in a given semester must find a faculty member willing to supervise the research. Before enrolling in the course, the student must submit a research proposal form to the Computer Science Graduate Program Committee no later than the end of the 10th week of the prior semester. At most three credits of CMSC 697 can be applied toward the degree.

The thesis can be in any area of computer science or an interdisciplinary area with a strong computer science component. The proposed content will be developed in conjunction with the student's thesis adviser. The thesis may take the form of an in-depth literature search and exposition on some area of computer science, a substantial project or other application that involves a depth of computer science knowledge, original research, or some combination of these forms. The student will produce a written thesis in the format specified by the VCU Graduate School, and will publicly defend the thesis before a committee consisting of the thesis adviser, at least one other faculty member from the computer science program, and a faculty member from outside of the computer science program.

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## Thesis option

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### M.S. requirements in computer science – Thesis option (30 credits):

A minimum of 27 non-thesis credits, including at least 12 credits at the 600 level.

Three credits in CMSC 697 Directed Research.

Courses that are transferred are subject to the following rules. These credits must not have been applied to any other degree; however, they may have been taken as part of a postbaccalaureate certificate program.

No more than six credits in graduate-level courses taken at VCU before admission to the M.S. program may be counted toward the M.S. degree.

Up to one-third of a student's non-research graduate-level credits can be transferred into the M.S. program from another college or university.

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The thesis can be in any area of computer science or an interdisciplinary area with a strong computer science component. The proposed content will be developed in conjunction with the student's thesis adviser. The thesis may take the form of an in-depth literature search and exposition on some area of computer science, a substantial project or other application that involves a depth of computer science knowledge, original research, or some combination of these forms. The student will produce a written thesis in the format specified by the VCU Graduate School, and will publicly defend the thesis before a committee consisting of the thesis adviser, at least one other faculty member from the computer science program, and a faculty member from outside of the computer science program.

## Department of Electrical and Computer Engineering

The Electrical and Computer Engineering Department prepares students for highly competitive, national placement in electrical and computer engineering employment and graduate education by providing a thorough grounding in electrical science and design, together with a sound foundation in mathematics, basic sciences and life skills.

An electrical and computer engineering track is available in the Master of Science in Engineering as well as the Ph.D. in Engineering. The Electrical and computer engineering track is designed to prepare students for practice, research and/or teaching of electrical and computer engineering at the advanced level. The track provides intensive preparation for professional practice in the microelectronics, nanoelectronics, computer engineering and controls and communications aspects of electrical and computer engineering. At the advanced level, this track prepares individuals to perform original, leading edge research in the broad areas of microelectronics, nanoelectronics, controls and communications and computer engineering.

### Administration

**Ashok Iyer**  
Professor and Department Chair

## Department of Mechanical Engineering

The Mechanical Engineering Department provides quality graduate and undergraduate education in the diverse area of mechanical engineering, emphasizing:

- sound technical foundation.
- creative approach to design and problem solving.
- ability to communicate effectively.
- the understanding of sound business practice.

A mechanical engineering track is available in the Master of Science in Engineering as well as the Ph.D. in Engineering. The Mechanical Engineering track is designed primarily for students who have an interest in pursuing research in the variety of areas of mechanical engineering.

Those include but are not limited to thermal sciences, materials, design and manufacturing, and computational mechanics. Emphasis is placed on modern research areas such as smart materials, flow controls, microelectro mechanicals systems (MEMS), nanotechnology and biomechanics.

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**Administration****Mohomed Gad-el-Hak**

Inez Caudill Professor and Department Chair

# School of Medicine



The School of Medicine of the then Medical College of Virginia opened on November 5, 1838, as the medical department of Hampden-Sydney College. Full-time clinical faculty members were first appointed in 1928, and improved facilities became available between 1936 and 1941 with the completion of the 600-bed West Hospital, A. D. Williams Clinic and Hunton Hall dormitory, located on the current site of the Main Hospital building. Growth in faculty students and facilities continued after World War II, leading to the development of today's academic health center.

Hospital facilities on the MCV Campus include both in-patient and out-patient facilities. MCV Hospitals of the VCU Health System is licensed for 902 beds. In addition, the hospital at the McGuire Veterans Affairs Medical Center (600 beds) provides excellent patient care, training and research opportunities for the School of Medicine through its affiliation programs.

In the School of Medicine, advanced degree programs are coordinated through the Office of the Associate Dean for Graduate Education, who acts for the dean on all issues related to administration of advanced degree programs. Each advanced-degree program is represented by a faculty member who serves as director for graduate programs. Directors are appointed either by the chair of the department offering graduate degrees or, in the case of interdisciplinary programs, by the dean in consultation with the chairs of participating departments. The directors of graduate programs act on behalf of the programs and hold the responsibility and authority to represent the respective department(s) and their faculty to the school.

## Administration

1101 E. Marshall St.  
P.O. Box 980565  
Richmond, VA 23298-0565  
<http://www.medschool.vcu.edu>

### Jerome F. Strauss III

Executive Vice-President for Medical Affairs (VCU Health System) and Dean

### Tilahun Adera

Associate Dean for Public Health

### Gordon L. Archer

Acting Associate Dean for Research

### Diane Biskobing

Assistant Dean for Pre-clinical Education

### Judy L. Brannen

Acting Associate Dean for Veteran Affairs

### Craig E. Cheifetz

Assistant Dean for Medical Education, VCU School of Medicine – Inova Campus

### Jan F. Chlebowski

Associate Dean for Graduate Education

### Ralph R. Clark III

Associate Dean for Clinical Activities

### George D. Ford

Assistant Dean for Sponsored Programs

### William M. Gleason

Senior Associate Dean for Finance and Administration

### Carol L. Hampton

Associate Dean for Faculty and Instructional Development

### Thomas Holland

Acting Associate Dean for Development

### Sheldon Markowitz

Associate Dean for Veterans Services

### Paul E. Mazmanian

Associate Dean for Continuing Medical Education

### James M. Messmer

Senior Associate Dean for Medical Education

### Mary Alice O'Donnell

Acting Associate Dean for Graduate Medical Education

### James J. Potyraj

Associate Dean for the Practice Plan

### Amy Sebring

Assistant Dean for Program Review and Strategic Analysis

### Russell P. Seneca

Associate Dean for Medical Education, VCU School of Medicine – Inova Campus

### Elizabeth Waterhouse

Assistant Dean for Medical Education

### Richard P. Wenzel

Professor and Chair, Internal Medicine and Senior Associate Dean for Clinical Affairs

### Michelle Whitehurst-Cook

Associate Professor of Family Medicine and Associate Dean of Admissions

### Isaac K. Wood

Associate Dean for Student Affairs

## Accreditation

Genetic Counseling (master's degree)  
American Board of Genetic Counseling

Medicine (M.D.)  
Liaison Committee on Medical Education

Public Health (master's degree)  
Council on Education in Public Health

## Mission statement

The mission of the School of Medicine encompasses education and research in biomedicine including applications providing a constant improvement of the quality of health care for all citizens of Virginia. By using innovative, scholarly activity to create new knowledge, providing better systems of medical and science education and developing more effective health care methods for diverse populations, the School of Medicine seeks to enhance the training of physicians and biomedical scientists. The School of Medicine shares the general objectives of VCU.

1. To maintain an environment of educational excellence that will attract students and faculty interested in an institution maintaining the highest academic standards.
2. To promote an educational atmosphere that will develop in students:
  - (a) desire and interest in lifelong learning, (b) intellectual curiosity, and (c) excellence in skills and knowledge required for the solution of

problems of health and disease for diverse populations.

3. To provide standards of clinical practice and scientific investigation that will serve students as examples throughout their professional careers.

The primary aim of the School of Medicine is to provide an academic environment appropriate for the education of its students, including undergraduate medical students, advanced-degree (graduate) students and graduate physician house officers, as well as continuing education directed toward the needs of practicing physicians. In the classroom, laboratory, clinic and hospital, the faculty and students are brought together in teaching-learning experiences that promote scientific scholarship and personal growth in knowledge and professional skills applicable to careers in a diverse workplace environment.

The School of Medicine and its faculty have vested responsibilities for the advancement of knowledge through research and for service to the community through application of skills in biomedical knowledge, health care leadership and patient care. Therefore, the school shares with teaching the interdependent and almost inseparable objectives of research and service.

The School of Medicine is located on the MCV Campus of Virginia Commonwealth University.

For comprehensive information on the School of Medicine departments, programs and faculty, please go to the school Web site at <http://www.medschool.vcu.edu>.

### Faculty and facilities

The School of Medicine consists of 700 full-time faculty, including affiliates, assisted by 630 residents and fellows and more than 700 clinical voluntary faculty. Programs of instruction and research are conducted on campus, at the McGuire Veterans Affairs Medical Center and at affiliated hospitals in an effort to expose the students to the variety of clinical disorders encountered in the eastern U.S. The School of Medicine has established a geographically separate campus at the Inova Fairfax Hospital. Each year, 24 third-year students take all their clinical clerkships at Inova Fairfax Hospital. Their fourth year elective program also is based at the Inova Fairfax Hospital.

### Graduate programs

A complete listing of advanced degree programs including links to departments, programs, contact information and application requirements can be found at <http://www.medschool.vcu.edu/prospective>.

Graduate programs offering Master of Science and doctoral training in the School of Medicine include:

- anatomy
- biochemistry
- biostatistics
- epidemiology (doctoral training only)
- human genetics
- microbiology and immunology
- pathology (doctoral training only)
- pharmacology and toxicology
- physiology

The Department of Human Genetics offers a Master of Genetic Counseling degree (M.S.) and the Department of Epidemiology and Community Health offers the Master of Public Health (M.P.H.) degree. Both of these degree programs are accredited by the appropriate national organizations.

The Department of Human Genetics offers a combined degree program that pairs the Master of Genetic Counseling and the Ph.D. in Human Genetics. The school partners with the School of Allied Health Professions to offer combined Anatomy/Physical Therapy and Physiology/Physical Therapy Ph.D. programs.

Recognizing that graduate education should prepare students for a variety of career options, and that developments in the basic sciences have expanded the breadth of scholarship, the school has developed approaches to interdisciplinary education, particularly in the areas of neuroscience, molecular biology and genetics, immunology, and structural biology.

A two-semester post-baccalaureate certificate program offering training for students seeking admission to professional school (i.e., School of Medicine, School of Dentistry) is available as the Pre-medical Basic Health Sciences Certificate. Defined curricula, which also may serve as a foundation in other advanced degree programs, are offered in the following disciplines:

- anatomy
- biochemistry
- human genetics
- microbiology and immunology
- pharmacology and toxicology
- physiology

A School of Public Health is in the process of being developed within the School of Medicine. Programs housed in the Department of Epidemiology and Community Health and the Department of Biostatistics are being associated with the evolution of this unit.

### Application and admission to graduate programs

Application forms and instructions for applying to all graduate programs are available on the Graduate School Web site at <http://www.vcu.edu/graduate>.

1. The purpose of admission requirements and procedures is to ensure selection of competent students whose motivation, ability, education and character qualify them for graduate study in preparation for a career in science.
2. The following credentials constitute an application and should be sent to Virginia Commonwealth University, Graduate School, Richmond, VA 23284-3051.
  1. Application for admission on a form available to the applicant from either the VCU Graduate School or the VCU Office of International Education. A fee in the form of a check or money order (payable to VCU), must accompany the application. The fee cannot be returned nor credited toward tuition payment.
  2. Official transcripts of all undergraduate and graduate work sent directly from college or university registrars to the Graduate School.
  3. Letters of recommendation from three present or former teachers

or others the applicant believes to be qualified to evaluate fitness to engage in graduate study for the degree in the field of choice.

4. A personal statement from the applicant summarizing motivation, education and aims in pursuing graduate study.
5. Verbal, quantitative, and analytical portions of the Graduate Record Examination are required. Medical College Admission Test or Dental Aptitude Test may be acceptable in lieu of the GRE for selected programs.
6. International applicants for whom English is a foreign language must meet departmental admission requirements for performance on the TOEFL (Test of English as a Foreign Language). See section on international students in the Graduate Studies at VCU section of this Web site.
3. Acceptance of an applicant is based upon the recommendation of the director of graduate programs of the relevant program.

While most students matriculate in the fall semester, arrangements may be made to initiate graduate work at other times during the academic year.

### Ph.D. programs

#### General requirements for graduate degrees

1. All full-time graduate students are expected to register for a minimum of five credit hours for the fall and spring semesters and six credit hours for the summer session. This requirement includes research. As an example, when students are registered for 10 credits in formal courses, they are expected to undertake five credits of research under the direction of their adviser or any approved faculty member. Research courses shall be graded as "S" (satisfactory), "U" (unsatisfactory) or "F" (fail). Registration for one credit hour is permitted only with prior permission.
2. Students are required to remain in good academic standing through the course of their degree program. Unsatisfactory student performance includes:
  1. the assignment of a grade of "U," "D" or "F" in any course.
  2. failure to maintain a cumulative GPA of 2.5 or greater.
  3. failure to pass the written or oral comprehensive examination.
  4. failure to pass the final examination.

A student whose performance is unsatisfactory must obtain the approval of the MCV Campus Graduate Committee to gain permission for continuing in the graduate program. The committee elicits the recommendation of the department/program (as represented by the director of graduate studies of the appropriate program) and, as appropriate, the student's adviser in making a determination. Unsatisfactory performance also constitutes grounds for the termination of financial assistance to the student.

5. Students may not take the comprehensive examination for the Ph.D. degree if their overall GPA is less than 2.5 or if the GPA for courses within the major department is below 3.0. Students may not take the final oral examination for the M.S. or Ph.D. degree if their overall GPA is below 3.0. The examining body for the administration of the

comprehensive examinations and the final examination is the student advisory committee. For the oral comprehensive examination for Ph.D. students and the final examinations for M.S. students, the body is supplemented by the addition of a representative of the MCV Campus Graduate Committee who chairs the examining body. The representative must be a member of the graduate faculty and is appointed by the chair of the MCV Campus Graduate Committee. The representative holds the responsibility for compliance with protocols appropriate to the examination, including the equitable treatment of the candidate.

6. Copies of the thesis/dissertation consistent with university standards shall be provided to the members of the student's advisory committee three weeks or more before the date of the defense of the thesis/dissertation. Following acceptance of the thesis/dissertation defense schedule by the committee, the student must submit a copy of the thesis/dissertation and a request for scheduling of the final examination to the chair of the MCV Campus Graduate Committee a minimum of ten working days in advance of the examination date. After passing the final examination, it shall be the responsibility of the candidate to present to the dean's office the approved original thesis/dissertation plus the minimum required number of copies (three for M.S., four for Ph.D.) in final form suitable for binding. In consultation with the office staff, the candidate shall be responsible for the binding and the processing of the thesis through VCU Libraries and for the payment of all charges for these services.
7. A degree is granted only after all requirements have been fulfilled, including payment of all fees to the university, and after submission of the copies of the thesis for binding.
8. VCU currently requires registration for a defined credit hour level during both the didactic and research phases of advanced degree training. For programs requiring the preparation of a thesis or dissertation, there is therefore no obligatory linkage between the accumulation of credit hours and an expectation that a degree be awarded.

As a guide to monitoring the timely completion of the degree within the present enrollment framework, the accumulation of 80 credit hours for a M.S. degree and 180 credit hours for a Ph.D. degree can be taken as a reasonable measure. These credit hour totals refer to degree programs requiring the preparation of a thesis or dissertation. Unless explicitly stated, the figures cited above apply to Master of Science (M.S.) and Doctor of Philosophy (Ph.D.) programs offered by the School of Medicine.

### The student adviser and advisory committee

Students receive guidance and counsel from the director of graduate programs for the appropriate program prior to appointment of the permanent adviser. The permanent adviser holds the primary responsibility for monitoring the development of the student in the program and providing the appropriate guidance and counsel essential to the scholarly development of the student.

An advisory committee, appointed shortly after the permanent adviser is appointed, serves as both an examining and consultative body, functioning to assist the development of the student. Committee members hold a special responsibility as a source of counsel for each student.

1. Each student shall have an adviser and an advisory committee.

## 2. Appointment of the adviser:

1. The initial adviser will be the director of the graduate program or his/her designee prior to appointment of the permanent adviser.
2. A permanent adviser shall be appointed from the graduate faculty by the chair of the MCV Campus Graduate Committee upon recommendation of the chair of the student's major department. Appointment should be made no later than the beginning of the fall semester following matriculation. A change in the permanent adviser may be made by the chair of the MCV Campus Graduate Committee upon recommendation of the chair of the major department.

## 3. Duties of the adviser:

1. The adviser shall, with the student's advisory committee, have responsibility for guiding the student's academic program.
2. The adviser shall develop a plan for the student's didactic program with the student.
3. The adviser shall, on the basis of the proposed didactic and scholarly program for the student, identify members of the faculty to comprise the student's advisory committee and elicit their agreement to serve, the adviser serving as the chair of the committee.
4. The adviser shall supervise the student's research work and dissertation preparation and be one of the examiners of the dissertation (Ph.D.).
5. At the close of the spring semester, the adviser shall submit to the program director or the chair of the MCV Campus Graduate Committee a report covering the progress of the student. Copies of the report should be provided to the student and the membership of the student advisory committee by the adviser.

## 6. The student's advisory committee:

1. The student's advisory committee shall be appointed no later than the end of the fall semester of the second year after matriculation by the chair of the MCV Campus Graduate Committee, upon recommendation of the student's adviser, review by the graduate program director and recommendation of the chair of the department of the permanent adviser. Appointment of the student advisory committee must be done within three months of the appointment of the permanent adviser and prior to the administration of comprehensive (or final) examinations. The composition of the advisory committee shall be such that significant areas of the student's scholarly program are represented in the expertise of the faculty members.
  1. The committee for the Ph.D. candidate shall consist of a minimum of five members as follows: the student's adviser; two other members of the graduate faculty of the department/program in which the student is enrolled; and at least two other members of the graduate faculty from departments other than the one in which the student is enrolled (where feasible, from two different departments).
2. A faculty member who is not a member of the graduate faculty may be appointed to a student advisory committee if approved by the MCV Campus Graduate Committee. Appointment is made by the dean of the Graduate School.

## 3. Duties of the student's advisory committee:

1. The advisory committee functions as an advisory body to ensure that timely progress toward degree completion is being achieved, as an examining body participating as appropriate for the intended degree in written qualifying examinations and conducting the oral qualifying examination and final examination, and as a consultative body to provide scholarly counsel.
2. The student's advisory committee shall work with the student's adviser in guiding the student's graduate program and shall meet at least annually. It is strongly recommended that the advisory committee meet with the student prior to administration of the comprehensive examination(s) by the committee.
3. The student's advisory committee shall recommend and approve a degree program (including foreign language if applicable) for the student as soon as it is practical. The proposed program should be filed with the chair of the MCV Campus Graduate Committee no later than the third semester of study.
4. The student's advisory committee shall conduct the oral comprehensive and final examination.

**Doctor of Philosophy**

1. Advanced graduate study leading to a Doctor of Philosophy degree is offered in the departments of Anatomy and Neurobiology, Biochemistry, Biostatistics, Epidemiology and Community Health, Human Genetics, Microbiology and Immunology, Pathology, Pharmacology and Toxicology, and Physiology.
2. A minimum of 30 credit hours exclusive of research credits is generally required. In practice, a minimum of four years of study, including research, is necessary to complete all requirements.
3. For all Ph.D. programs, a period of residence of at least two consecutive semesters is required. In the context of Ph.D. training, "residence" refers to full-time enrollment, equivalent to enrollment of nine or more credit hours in a given academic term. The School of Medicine recommends that doctoral students maintain "residency" status for one academic year (fall and spring semesters), usually during the initial year of study. This recommendation is to ensure that the didactic component of training is not prolonged. Students should register in each academic term as a means of ensuring that timely progress toward degree completion is achieved. The specific requirements for residency will be detailed by the individual programs. A time limit of seven calendar years, beginning at the time of first registration, is placed on work to be credited toward the doctor of philosophy degree.

**Admission to candidacy**

The development of the individual as an independent research scientist is a critical component of the Ph.D. degree. The potential for such development is assessed on the basis of both mastery of subject matter and research competency as judged in the context of written and oral examinations administered at the level of department or program. Students are admitted to candidacy by the dean on the basis of completing

examinations as required and the recommendation of the faculty adviser, student advisory committee and graduate program director.

### Comprehensive examinations

In order to advance to doctoral candidacy, the student must pass both written and oral comprehensive examinations. The written examination(s) generally focus(es) on the subject matter deemed critical as a foundation in the particular program. The written examination is largely based on material covered in required course work and its application to theoretical and practical problems. The oral examination, which follows successful completion of the written examination(s), is administered to assess the ability of the candidate to integrate information and display an appropriate mastery of problem-solving capabilities.

1. To advance to candidacy, the student shall take written and oral examinations designed to determine the potential of the individual for development as an independent research scientist. Advancement to candidacy should preferably take place prior to initiating the third academic year in the program. The written examination is administered by the student's department/program. In the event of failure of the written comprehensive examination, the student, with the approval of the MCV Campus Graduate Committee, may be permitted to repeat the written examination.
2. After passing the written examination(s), the student is eligible for the oral examination. The oral examination is conducted by the student's advisory committee and is chaired by a graduate faculty member representing the MCV Campus Graduate Committee who serves as a voting member of the examining committee. The oral examination is to be administered no later than six months after passing the written examination. (Departments/programs may require a shorter interval.)
3. The oral examination is scheduled through the Office of Graduate Education. An announcement of the candidate's name, department/program and the time and place of the examination shall be posted at least 10 working days in advance of the examination. If a written document prepared by the candidate is a component of the examination, the document shall be provided to the members of the examining committee at least 10 working days in advance of the examination. The oral comprehensive examination is open to all members of the faculty. Faculty members in attendance may ask questions of the candidate, but their questions shall not be presented until after the advisory committee has completed its questions. Faculty members other than those on the advisory committee shall not vote on the success or failure of the candidate. If a student fails the oral examination, the student may be reexamined with the approval of the MCV Campus Graduate Committee.
4. A favorable vote of the examining committee (all members of body being required to vote) with no more than one negative vote, is required to pass the examination. Members of the examining committee must vote on the performance as either pass or fail.
5. The oral examination must be completed successfully at least six months before submission of the dissertation.

### Dissertation research

1. The student must conduct a substantial original investigation under the supervision of the permanent adviser and prepare a dissertation

reporting the results of this research and analyzing its significance in relation to existing scientific knowledge.

2. The body of experimental work to be incorporated into the dissertation is subject to the approval of the membership of the student advisory committee. The advisory committee should, therefore, be formally consulted as the research project nears completion to ensure that there is agreement with respect to the material deemed necessary and sufficient for incorporation into the dissertation. Such consultation will normally occur in the form of a meeting of the advisory committee with the student. The faculty adviser has a responsibility to advise the student when the meeting of the advisory committee for this purpose should take place.
3. The dissertation is prepared in an acceptable form and style with the counsel of the faculty adviser. The faculty adviser determines when the dissertation document can serve as the basis for the final oral examination (or dissertation defense). With the approval of the faculty adviser, the final oral examination by the advisory committee is scheduled and the dissertation document is distributed to the advisory committee. Distribution of the dissertation document to the advisory committee will usually occur at least ten working days in advance of the final oral examination. The Office of Graduate Education is informed of the scheduling of the final oral examination ten working days in advance of the examination. The Office of Graduate Education will then post an announcement of the final oral examination to include the name and department of the candidate together with the title of the dissertation and the day, place and time of the final oral examination.
4. The final oral examination is conducted by the student advisory committee at a specified time and place, is chaired by the faculty adviser and is open to all members of the faculty. The subject matter of the examination is limited to the content of the candidate's dissertation and related areas. A favorable vote of the advisory committee with no more than one negative vote shall be required to indicate that the candidate has passed the final oral examination. All advisory committee members must vote. The outcome of the final oral examination is reported to the Office of Graduate Education. If the examination is not passed, the Student Advisory Committee must recommend a course of action for the student. The committee might, for example, recommend that a re-examination be scheduled, or that a major revision of the dissertation (including added data collection and/or analysis) be required prior to rescheduling of the examination, or that the student be terminated from the program or other action as deemed appropriate by the committee. A majority of the committee membership must concur in the recommended course of action. The recommendation must be communicated in writing to the appropriate graduate program director for approval within five working days of the examination. The program, acting through the graduate program director, shall accept the recommendation of the committee or determine an alternative within an additional five working days. The course of action approved by the program will be communicated in writing to the student by the graduate program director. The graduate program director shall inform the Office of Graduate Education of the School of Medicine in writing as to the action taken.

If a re-examination is the recommended course of action, a representative of the MCV Campus Graduate Committee will be appointed to serve as the chair of the examining committee.

5. The student advisory committee approves the dissertation document as acceptable following the final oral examination. Approval of the

dissertation as acceptable is indicated by the signature of all members of the advisory committee on the signature page of the dissertation. Approval of the dissertation by the advisory committee must be unanimous.

### Termination of enrollment

The university reserves the right to terminate the enrollment of any student for unlawful, disorderly or immoral conduct or for persistent failure to fulfill the purposes for which he or she was matriculated.

A student enrolled in a graduate program under the supervision of the MCV Campus Graduate Committee may be dismissed from the school in which he is enrolled for failure to meet academic requirements prescribed by his school or failure to exhibit the attitudes and skills deemed necessary to function within his chosen scientific discipline.

Any action by a graduate student in a program under the supervision of the MCV Campus Graduate Committee considered to be unprofessional conduct shall constitute cause for disciplinary action.

Unprofessional conduct includes, but is not limited to:

1. fraud or deceit in gaining admission to the university, i.e., false or obviously misleading representations on the admission application,
2. an act that violates the established legal standards regarding conduct of one person toward society (i.e., stealing, lying, cheating and slander),
3. conviction of a felony involving moral turpitude, and
4. plagiarism or other scientific misconduct.

### Master's programs

Advanced graduate study leading to the Master of Science degree is offered in the departments of [Anatomy and Neurobiology](#), [Biochemistry](#), Biostatistics, Human Genetics, Microbiology and Immunology, Pharmacology and Toxicology, and Physiology. The Department of Preventive Medicine and Community Health offers the Master of Public Health degree and the Department of Human Genetics offers the Master of Genetic Counseling degree.

### General requirements for graduate degrees

1. All full-time graduate students are expected to register for a minimum of five credit hours for the fall and spring semesters and six credit hours for the summer session. This requirement includes research. As an example, when students are registered for 10 credits in formal courses, they are expected to undertake five credits of research under the direction of their adviser or any approved faculty member. Research courses shall be graded as "S" (satisfactory), "U" (unsatisfactory) or "F" (fail). Registration for one credit hour is permitted only with prior permission.
2. Students are required to remain in good academic standing through the course of their degree program. Unsatisfactory student performance includes:
  1. the assignment of a grade of "U," "D" or "F" in any course.
  2. failure to maintain a cumulative GPA of 2.5 or greater.
  3. failure to pass the written or oral comprehensive examination.

4. failure to pass the final examination.

A student whose performance is unsatisfactory must obtain the approval of the MCV Campus Graduate Committee to gain permission for continuing in the graduate program. The committee elicits the recommendation of the department/program (as represented by the director of graduate studies of the appropriate program) and, as appropriate, the student's adviser in making a determination. Unsatisfactory performance also constitutes grounds for the termination of financial assistance to the student.

5. Students may not take the comprehensive examination for the Ph.D. degree if their overall GPA is less than 2.5 or if the GPA for courses within the major department is below 3.0. Students may not take the final oral examination for the M.S. or Ph.D. degree if their overall GPA is below 3.0. The examining body for the administration of the comprehensive examinations and the final examination is the student advisory committee. For the oral comprehensive examination for Ph.D. students and the final examinations for M.S. students, the body is supplemented by the addition of a representative of the MCV Campus Graduate Committee who chairs the examining body. The representative must be a member of the graduate faculty and is appointed by the chair of the MCV Campus Graduate Committee. The representative holds the responsibility for compliance with protocols appropriate to the examination, including the equitable treatment of the candidate.
6. Copies of the thesis/dissertation consistent with university standards shall be provided to the members of the student's advisory committee three weeks or more before the date of the defense of the thesis/dissertation. Following acceptance of the thesis/dissertation defense schedule by the committee, the student must submit a copy of the thesis/dissertation and a request for scheduling of the final examination to the chair of the MCV Campus Graduate Committee a minimum of ten working days in advance of the examination date. After passing the final examination, it shall be the responsibility of the candidate to present to the dean's office the approved original thesis/dissertation plus the minimum required number of copies (three for M.S., four for Ph.D.) in final form suitable for binding. In consultation with the office staff, the candidate shall be responsible for the binding and the processing of the thesis through VCU Libraries and for the payment of all charges for these services.
7. A degree is granted only after all requirements have been fulfilled, including payment of all fees to the university, and after submission of the copies of the thesis for binding.
8. VCU currently requires registration for a defined credit hour level during both the didactic and research phases of advanced degree training. For programs requiring the preparation of a thesis or dissertation, there is therefore no obligatory linkage between the accumulation of credit hours and an expectation that a degree be awarded.

As a guide to monitoring the timely completion of the degree within the present enrollment framework, the accumulation of 80 credit hours for a M.S. degree and 180 credit hours for a Ph.D. degree can be taken as a reasonable measure. These credit hour totals refer to degree programs requiring the preparation of a thesis or dissertation. Unless explicitly stated, the figures cited above apply to Master of Science and Doctor of Philosophy programs offered by the School of Medicine.

## The student adviser and advisory committee

Students receive guidance and counsel from the director of graduate programs for the appropriate program prior to appointment of the permanent adviser. The permanent adviser holds the primary responsibility for monitoring the development of the student in the program and providing the appropriate guidance and counsel essential to the scholarly development of the student.

An advisory committee, appointed shortly after the permanent adviser is appointed, serves as both an examining and consultative body, functioning to assist the development of the student. Committee members hold a special responsibility as a source of counsel for each student.

1. Each student shall have an adviser and an advisory committee.
2. Appointment of the adviser:
  1. The initial adviser will be the director of the graduate program or his/her designee prior to appointment of the permanent adviser.
  2. A permanent adviser shall be appointed from the graduate faculty by the chair of the MCV Campus Graduate Committee upon recommendation of the chair of the student's major department. Appointment should be made no later than the beginning of the fall semester following matriculation. A change in the permanent adviser may be made by the chair of the MCV Campus Graduate Committee upon recommendation of the chair of the major department.
3. Duties of the adviser:
  1. The adviser shall, with the student's advisory committee, have responsibility for guiding the student's academic program.
  2. The adviser shall develop a plan for the student's didactic program with the student.
  3. The adviser shall, on the basis of the proposed didactic and scholarly program for the student, identify members of the faculty to comprise the student's advisory committee and elicit their agreement to serve, the adviser serving as the chair of the committee.
  4. The adviser shall supervise the student's research work and thesis preparation and be one of the examiners of the thesis (M.S.).
  5. At the close of the spring semester, the adviser shall submit to the program director or the chair of the MCV Campus Graduate Committee a report covering the progress of the student. Copies of the report should be provided to the student and the membership of the student advisory committee by the adviser.
6. The student's advisory committee:
  1. The student's advisory committee shall be appointed no later than the end of the fall semester of the second year after matriculation by the chair of the MCV Campus Graduate Committee, upon recommendation of the student's adviser, review by the graduate program director and recommendation of the chair of the department of the permanent adviser. Appointment of the student advisory committee must be done within three months of the appointment of the permanent adviser and prior to the

administration of comprehensive (or final) examinations. The composition of the advisory committee shall be such that significant areas of the student's scholarly program are represented in the expertise of the faculty members.

1. The committee for the M.S. candidate shall consist of a minimum of three members as follows: the student's adviser (who serves as chair of the committee); one other member of the graduate faculty of the department/program in which the student is enrolled; and one other member of the graduate faculty from a department other than the one in which the student is enrolled.
2. A faculty member who is not a member of the graduate faculty may be appointed to a student advisory committee if approved by the MCV Campus Graduate Committee. Appointment is made by the dean, School of Graduate Studies.
3. Duties of the student's advisory committee:
  1. The advisory committee functions as an advisory body to ensure that timely progress toward degree completion is being achieved, as an examining body participating as appropriate for the intended degree in written qualifying examinations and conducting the oral qualifying examination and final examination, and as a consultative body to provide scholarly counsel.
  2. The student's advisory committee shall work with the student's adviser in guiding the student's graduate program and shall meet at least annually. It is strongly recommended that the advisory committee meet with the student prior to administration of the comprehensive examination(s) by the committee.
  3. The student's advisory committee shall recommend and approve a degree program (including foreign language if applicable) for the student as soon as it is practical. The proposed program should be filed with the chair of the MCV Campus Graduate Committee no later than the third semester of study.
  4. The student's advisory committee shall conduct the oral comprehensive and final examination.

## Master of Science

1. Advanced graduate study leading to the Master of Science degree is offered in the departments of Anatomy and Neurobiology, Biochemistry, Biostatistics, Human Genetics, Microbiology and Immunology, Pharmacology and Toxicology, and Physiology. The Department of Preventive Medicine and Community Health offers the Master of Public Health degree and the Department of Human Genetics offers the Master of Genetic Counseling degree.
2. A minimum of 24 semester course hours is required, exclusive of research credits. In practice, it is found that two years of study are usually necessary to complete the requirements. A time limit of five calendar years, beginning at the time of first registration, is placed on work to be credited toward the Master of Science degree. Generally a maximum of one-third of the hours required for a master's degree may be transferred from another VCU program or outside institution and



applied toward the degree upon recommendation of the student's director of graduate programs with the concurrence by the chair of the MCV Campus Graduate Committee.

3. Each student must conduct an original investigation under the supervision of the permanent adviser, prepare a thesis reporting the results of this research and analyze its significance in relation to existing scientific knowledge. This study is reported in a thesis prepared in acceptable form and style.
4. The body of experimental work to be incorporated into the thesis is subject to the approval of the student advisory committee members. The advisory committee should, therefore, be formally consulted as the research project nears completion to ensure that there is agreement with respect to the material deemed necessary and sufficient for incorporation into the thesis. Such consultation will normally occur in the form of a meeting of the advisory committee with the student. The faculty adviser has a responsibility to advise the student when the meeting of the advisory committee for this purpose should take place.
5. The thesis is prepared in an acceptable form and style with the counsel of the faculty adviser. The faculty adviser determines when the thesis document can serve as the basis for the final oral examination (or thesis defense). With the approval of the faculty adviser, the final oral examination by the advisory committee is scheduled and the thesis document is distributed to the advisory committee. Distribution of the thesis document to the advisory committee should take place at least ten working days in advance of the final oral examination. The Office of Graduate Education is to be informed of the scheduling of the final oral examination ten working days in advance of the scheduled date. The Office of Graduate Education then identifies a representative of the MCV Campus Graduate Committee to chair the examination, and provides an announcement of the final oral examination, which includes the name and department of the candidate together with the title of the thesis and the day, place and time of the final oral examination.
6. The final oral examination is conducted by the student advisory committee at the designated time and place and is open to the faculty. A representative of the MCV Campus Graduate Committee serves as the chair of the examination committee and is a voting member of the examination committee. The subject matter of the examination includes the subject matter of course work as well as the content of the thesis. A favorable vote of the advisory committee with no more than one negative vote is required to indicate that the candidate has passed the final oral examination. All members of the examination committee must vote. The outcome of the final oral examination is reported to the Office of Graduate Education. If the outcome is negative, the final oral examination may be retaken with the approval of the MCV Campus Graduate Committee. Advance approval is requested in writing by the department on behalf of the candidate.
7. The student advisory committee approves the thesis document as acceptable after the final oral examination has been successfully completed. Approval of the thesis as acceptable is indicated by the signature of all members of the advisory committee on the signature page of the thesis. Approval of the thesis by the advisory committee must be unanimous. A thesis is not required for completion of the Master of Genetic Counseling Program. In lieu of the thesis, students in this tract are required to successfully pass comprehensive oral and written examinations.

## Master of Public Health

The M.P.H. degree is offered in four tracks (epidemiology, environmental health, addiction studies and generalist). A minimum of four semesters of full-time study (45 credit hours) is necessary to complete the degree requirements. All M.P.H. students are required to conduct a scientific investigation on a topic relevant to human and public health. The research project is conducted under the guidance of a faculty adviser and a preceptor with expertise in the topic area. The student must prepare a report of the research and give an oral presentation to the department.

## Termination of enrollment

The university reserves the right to terminate the enrollment of any student for unlawful, disorderly or immoral conduct or for persistent failure to fulfill the purposes for which he or she was matriculated.

A student enrolled in a graduate program under the supervision of the MCV Campus Graduate Committee may be dismissed from the school in which he is enrolled for failure to meet academic requirements prescribed by his school or failure to exhibit the attitudes and skills deemed necessary to function within his chosen scientific discipline.

Any action by a graduate student in a program under the supervision of the MCV Campus Graduate Committee considered to be unprofessional conduct shall constitute cause for disciplinary action.

Unprofessional conduct includes, but is not limited to:

1. fraud or deceit in gaining admission to the university, i.e., false or obviously misleading representations on the admission application,
2. an act that violates the established legal standards regarding conduct of one person toward society (i.e., stealing, lying, cheating and slander),
3. conviction of a felony involving moral turpitude, and
4. plagiarism or other scientific misconduct.

## Certificate programs

The School of Medicine offers a Postbaccalaureate Graduate Certificate in Premedical Basic Health Sciences. The certificate degree is offered by the departments of Anatomy, Biochemistry, Human Genetics, Microbiology and Immunology, Pharmacology and Toxicology, and Physiology.

## MCV Campus Graduate Committee

The assembled directors of graduate programs and the associate dean for graduate education form the MCV Campus Graduate Committee, with the associate dean serving as chair of the committee. This committee holds the responsibility for ensuring appropriate administration of graduate programs, reviewing modifications of didactic courses, new course offerings and new programs, reviewing proposed modifications of program curricula to ensure maintenance of standards of quality, avoid duplication and comply with the missions of the school, and for recommending action to the dean. The committee members provide the pool of candidates from which the school representatives to the University Graduate Council are chosen.

The School of Medicine follows the policies of the Graduate School with regard to the modification of existing courses, curricula and programs as well as the introduction of new offerings. Proposals will normally come from the faculty acting through departmental bodies charged with the responsibility of monitoring academic training. In the case of offerings in

interdisciplinary areas, these will normally require the input and approval of departments whose faculty and students are participants. The associate dean for graduate education in the School of Medicine may assist in the coordination of the proposal process. Proposed changes and additions are, under University guidelines, subject to review by the Curriculum Committee of the school. The MCV Campus Graduate Committee serves as the Curriculum Committee for the School of Medicine. On approval by the MCV Campus Graduate Committee, the approval of the dean of the School of Medicine is required prior to submission to University Graduate Council for review.

For comprehensive information on the School of Medicine departments, programs and faculty, please go to the school Web site at <http://www.medschool.vcu.edu>.

## Professional programs

The School of Medicine offers the Undergraduate Medical Education, leading to the first-professional Doctor of Medicine degree; as well as Graduate Medical Education and Continuing Medical Education. Refer to each program's description for admission and program requirements.

### Undergraduate Medical Education (M.D.)

The School of Medicine offers the first-professional [Doctor of Medicine \(M.D.\)](#) that develops students' clinical skills, professionalism and critical thinking. For more information about admission standards, curriculum requirements and other policies for the M.D. program, refer to the Medicine, Doctor of (M.D.) section of this bulletin.

### Graduate Medical Education

Graduate Medical Education at Virginia Commonwealth University Health System provides diverse opportunities with very high academic and clinical standards for medical and dental graduates to pursue specialty training. Currently we offer over 70 medical and dental programs. The programs are accredited by either the Accreditation Council for Graduate Medical Education (ACGME) or the American Dental Association (ADA). Most of the programs use the ERAS application and the NRMP Matching program. We have over 700 residents training with the Health System and bring in approximately 200 new residents per year.

We encourage all qualified applicants to apply to our programs. For a detailed description of the qualifications and requirements please go to our Web page at [www.medschool.vcu.edu/gme/residency.html](http://www.medschool.vcu.edu/gme/residency.html).

### Continuing Medical Education

The primary goal of the VCU Office of Medical Education is to provide continuing educational experiences specifically designed to enhance the delivery of high quality patient care by physicians and other health care professionals in Virginia and other states. The philosophy of continuing medical education is based on the belief that learning must be viewed as a lifelong process. In past generations, the graduating physician was able to look upon an acquired knowledge base as a reasonably stable resource for practicing medicine. However, today's rapidly expanding load of scientific information forces a continuing learning effort upon the physician. Undergraduate and graduate medical education alone can no longer offer reasonable assurance that practitioners are armed with the knowledge, attitudes and skills that will enable them to render optimal, achievable patient care throughout their careers. Continuing education is now linked with undergraduate and graduate education to complete the continuum of medical education.

The goal and philosophy stated herein undergird and lend direction to the effort of the Office of Medical Education as it engages in a diversity of educational and education-related activities. Specifically, the Office of Medical Education works in concert with the faculty of the School of

Medicine, as well as other individuals and organizations as appropriate, to:

- coordinate a statewide continuing medical education program for several networks of affiliate hospitals,
- organize the Virginia Hospital Television Network and provide continuing education programs for physicians and other health professionals directly into hospitals statewide, using satellite and audio-conferencing,
- develop and deliver a series of short courses, clinical workshops, seminars, international medical study tours and conferences for physicians and other health professionals,
- provide clinical refresher courses and make readily available self-learning materials and methods, conduct research to improve the process of continuing medical education, and
- improve the education of the general public in the proper use of health care resources.

Fostering an appreciation for the concept of lifelong learning in undergraduate and graduate medical school programs is a challenge that is now being confronted by medical schools throughout the nation. During these critical years, the attitudes of medical students toward continuing pursuits of learning are molded and developed. In order to encourage undergraduate and graduate students at VCU to embrace the concept of lifelong learning, the Office of Medical Education actively seeks their involvement in its various programs and activities. Brochures, posters and a yearly catalog are utilized to announce pending events.

Further information may be obtained by writing the Assistant Dean for Continuing Education, School of Medicine, Virginia Commonwealth University, P.O. Box 980048, Richmond, VA 23298-0048.

Virginia Commonwealth University School of Medicine requires that all medical students carry active health insurance. Health insurance benefits must be equal to or greater than those provided by the university health carrier. In addition, it is required that all students complete required immunizations within six months of matriculation and have repeat tuberculosis screening performed prior to the third-year clerkships. For details related to these policies, please visit [www.medschool.vcu.edu/studentactivities](http://www.medschool.vcu.edu/studentactivities).

## Combined degree programs

The School of Medicine offers several combined degree programs:

- M.D./Ph.D. Program
- M.D./M.H.A.
- M.D./M.P.H. Program
- Combined M.S./Ph.D. and D.D.S. degree programs

All programs require review and acceptance by the professional degree program (M.D.) as a condition of entry into the combined degree program. Training for the graduate degree takes place following an initial phase of training in the professional program. Following completion of graduate degree requirements, the final phase of training in the professional degree program is concluded. Consult the appropriate listing for details of the admissions and program requirements.

## Medicine, Doctor of (M.D.)

The program for the M.D. degree is divided into four phases, each of one year's duration. Medicine I, occupying the first year (mid-August to early June), emphasizes normal human structure, function, growth and development. Medicine II, occupying the second year (August to June), stresses the abnormal. Medicine III occupies the third year (July to July) and consists of clinical education and training. Medicine IV, lasting from August to mid-May, consists of approximately one-third required clinical education and training and approximately two-thirds electives at the VCU Health System's MCV Hospitals and at approved medical schools elsewhere in the United States and abroad. Elective opportunities also are offered in M-I and M-II.

School of Medicine students begin their clinical exposure in the first month of medical school in the Foundations of Clinical Medicine course. This longitudinal experience runs throughout the first two years and consists of one afternoon session per week in a private primary care physician's office, alternating with one afternoon per week in a small group session. This course gives the student the opportunity to learn the clinical relevance of basic science material and to work with a primary care role model. The course provides a fundamental understanding of the skills necessary for all clinical disciplines.

## Admissions

### Whitehurst-Cook, Dr. Michelle

Associate Dean of Admissions

[www.medschool.vcu.edu/admissions](http://www.medschool.vcu.edu/admissions)

The School of Medicine participates in the American Medical College Application Service. The AMCAS application forms can be obtained from AMCAS, 2450 N. St., N.W., Washington, D.C. 20037-1126. The electronic application is available at [www.aamc.org/students/amcas](http://www.aamc.org/students/amcas). Updated information is available at the School of Medicine Web site: [www.medschool.vcu.edu](http://www.medschool.vcu.edu). Application for the School of Medicine should be made on or after June 1 of the year preceding intended matriculation.

The closing date for filing applications for this institution is Oct. 15 of the year preceding the enrollment date. Priority for admissions is given to Virginia residents, however, 80 members of each class are from out of state. Members of minority groups under-represented in medicine are especially encouraged to apply to the School of Medicine. Students previously dismissed from a medical school will not be considered.

A nonrefundable \$80 application fee and supplemental information, including faculty recommendations, are required with all applications accepted for further consideration. The final date for returning supplemental information is January 3 of the year of possible enrollment in the School of Medicine. Students are given individual deadlines which are 45 days from the date the Supplemental Application is granted.

The School of Medicine will not admit students from other health sciences schools at VCU until such students have completed the degree program for which they are enrolled.

The School of Medicine participates in the Early Decision Plan. This program permits an applicant to file a single application through AMCAS prior to Aug. 1. All applicants filing under the Early Decision Plan will receive consideration for admission and a response on or before Oct. 1. All applications for the Early Decision Plan must be supported by the results of the new MCAT test at the time the application is made.

The early notification date of this plan ensures that those who are unsuccessful have ample time to request further distribution of their applications to other medical schools. Further information on the Early Decision Plan is available with the AMCAS application.

## Requirements for entrance

The MCAT is required as part of the application. It is necessary that the test be taken no later than the fall of the year of application since selections will be complete before the spring test is given in the year of admission. This test is produced by the American College Testing Program, P.O. Box 414, Iowa City, IA 52240, and is administered in colleges and universities throughout the country. Information about the MCAT is available through premedical advisers or directly from the American College Testing Program.

Applicants may be admitted on the basis of 90 semester hours of outstanding achievement; however, the majority of students admitted are completing their baccalaureate programs. The college major for premedical students should be selected in accordance with the individual students aptitude and interest. The prerequisites for the School of Medicine have been reduced to a minimum in order to permit the widest possible latitude in preparation for medical education.

Prerequisites for admission include a minimum of 90 semester hours (or the equivalent) in a U.S. or Canadian college or university accredited by the regional accrediting agency. This program of study must include a minimum of:

1. English – two semesters (one semester to include grammar and composition);
2. College mathematics – two semesters;
3. Biological science – eight semester hours, including laboratory experience. This requirement may be satisfied by general biology, general zoology or botany. No more than half may be botany;
4. General or introductory chemistry – eight semester hours, including laboratory. An appropriate portion of this requirement may be met by courses in analytical chemistry or physical chemistry;
5. Organic chemistry – eight semester hours, including laboratory. This course should be equivalent to and acceptable for continued studies in a chemistry major;
6. General or introductory physics – eight semester hours, including laboratory experience.

Students are encouraged to pursue their own intellectual interests in college in order to obtain a broad education consistent with their major program. Courses in medically related science areas will not relieve the student of his/her responsibility for these subjects in the medical curriculum.

## Selection factors

Demonstrated academic ability, as well as attributes of character and personality, are of significance to the admissions committee in the selection process. A review of academic achievement as represented by the standard academic record and summaries, MCAT scores, evaluations and interviews are all sources of information on which the comparative evaluation process is based. A review of the completed application file and interviews with members of the admissions committee are an integral part of the admissions process.

Noncognitive variables also are sought in all candidates. These qualities include, but are not limited to, health care experience, community service and social concern, communication skills both written and oral, leadership, ethical and moral behavior, creativity, compassion and empathy, altruism, personal maturity, self-confidence without arrogance, appropriate motivation, the ability to realistically self-appraise, and a demonstrated ability to work as a team member. These qualities and characteristics are judged by references within the letters of recommendation and from a careful review of the student's essays and extracurricular activities, as well

as the interviewers' assessment during the interview. The School of Medicine hopes to create a learning environment where students will meet colleagues whose life experiences and views differ significantly from their own. A physician must be at home and at ease in a wide variety of environments and with a wide variety of people. Students frequently comment that the aspect of the school they appreciate most is the diversity of their class. The admissions process seeks to foster that diversity of perspective and background by admitting students from a wide range of backgrounds — socioeconomic, cultural, geographic and educational.

The interview is an opportunity for the applicant to become acquainted with the institution and it offers additional information for the selection process. Only on-campus interviews in Richmond are available. Each year more applicants are interviewed than can be accepted in the class. Therefore, an interview is not an indication of acceptance to the School of Medicine.

Offers for admission are made in the Early Decision Plan and on the uniform acceptance date of Oct. 15, with admissions occurring at several points thereafter until the class selections have been completed. At the time the class is filled, an alternate list of applicants is compiled from which replacements are drawn for any vacancies that may occur in the selected class between notification and the third week of class attendance.

Since selections are made in advance of actual attendance, all acceptances are made on condition of satisfactory completion of courses planned or in progress. It is expected that candidates will maintain acceptable standards of deportment. Students offered acceptance into a class are expected to respond within two weeks of the offer. If such a response presents a problem, extension of the time for the response should be requested.

The enrollment of accepted candidates is considered complete only after payment of the \$100 deposit toward the first tuition payment. This deposit will be returned to the candidate should withdrawal occur prior to May 15 of the year of attendance. By the act of matriculation into the School of Medicine, the student accepts the responsibilities related to this opportunity and agrees that during the time that he/she is a registered student he/she will follow the rules and regulations established by the governing bodies of the School of Medicine and the university.

### Transfer in advanced standing

Advanced standing admission is open only to students who previously have not been dismissed from any medical school and who are in good standing in LCME-accredited American or Canadian medical schools. Transfers are only at the third-year level and are limited in number each year. Interested students should request information between Jan. 1 and Jan. 15 of the year they wish to transfer. Applicants must pass Step 1 of the U.S. medical licensing examination prior to matriculation.

For additional information please see the Frequently Asked Questions About Transfer location on the VCU School of Medicine Web site at [www.medschool.vcu.edu/curriculum/Transv.html](http://www.medschool.vcu.edu/curriculum/Transv.html).

### Disability Support Services

Virginia Commonwealth University in agreement with Section 504 of the Rehabilitation Act of 1973 and The Americans with Disabilities Act of 1990 provides reasonable accommodation to any individual who advises us of a disability. We wish to provide new and current students who have a disability the opportunity to voluntarily identify themselves.

Early identification permits the Coordinator of Services for Students with Disabilities the opportunity to acquire verification of the disability, if required, and the opportunity to get appropriate accommodations in place as soon as possible. All accommodations request are handled on an individual basis. Examples of some accommodations are; extended test taking time, alternative testing format, note takers, readers, scribes, quiet

testing area, sign language interpreters, assistive technology and computer software programs which are located in the library for student use.

If you are an individual with a disability and wish to identify yourself as such, please contact the Office of Disability Support Services. It is important to note that all disclosures are confidential and are released only with your permission. A comprehensive VCU Handbook for Students with Disabilities is available upon request. **Be sure to include your name, address and phone number if you write.** We also are available to answer questions about accommodations and services.

Director, VCU Office of Disability Support Services P.O. Box  
980124 Richmond, VA 23298-0124 (804) 828-9782 VTDD (804)  
828-4608 FAX (804) 828-4609 [www.vcuhealth.org/vp/sassdss](http://www.vcuhealth.org/vp/sassdss)

## Curriculum

### Messmer, Dr. James M.

Senior Associate Dean for Medical Education

[jmessme@vcu.edu](mailto:jmessme@vcu.edu)

(804) 828-8691

The program for the M.D. degree is divided into four phases, each of one years duration. Medicine I, occupying the first year (mid-August to early June), emphasizes normal human structure, function, growth and development. Medicine II, occupying the second year (August to May), stresses pathological conditions. Medicine III occupies the third year (July to July) and consists of clinical education and training. Medicine IV, lasting from August to mid-May, consists of approximately one-fourth required clinical education and training with the remainder open for electives at the Virginia Commonwealth University Medical Center and at approved medical schools elsewhere in the U.S. and abroad. Elective opportunities also are offered in M-I and M-II.

Registration in courses offered by the School of Medicine is restricted to students enrolled in the School of Medicine at Virginia Commonwealth University.

### Medicine I and II

The curriculum is viewed as a dynamic and evolving entity and course titles, content or duration of emphasis may be subject to modification for the sake of improving the learning experience.

Each course in M-I and M-II is designed and implemented by a faculty committee and each phase of the curriculum is supervised by a faculty coordinator.

### M-I Curriculum

The first year of medical school, from mid-August to early June, focuses on the normal human structure, function, growth and development.

1. Foundations of Clinical Medicine – [www.medschool.vcu.edu/admissions/fcm.html](http://www.medschool.vcu.edu/admissions/fcm.html)
2. Medical Bioethics
3. Population Medicine
4. Medical Biochemistry
5. Human Genetics
6. Gross and Developmental Anatomy

7. Physiology
8. Histology
9. Behavioral Sciences
10. Immunology
11. Neurosciences

Total Courses: 11

### **M-II Curriculum**

The second year, from early August to late May, emphasizes the pathologic manifestations in the treatment of diseases. All students participate in the following courses:

1. Foundations of Clinical Medicine
2. Medical Bioethics
3. Pharmacology
4. Pathogenesis
5. Microbiology
6. Hematology-Oncology
7. Endocrine
8. Renal
9. Respiratory
10. Cardiovascular
11. Behavioral Sciences II
12. Central Nervous System
13. Womens Health
14. Gastrointestinal
15. Musculoskeletal

Total Courses: 15

### **Medicine III**

#### **M-3 Clerkships**

During the third year, students receive clinical training by rotating through the various hospitals and ambulatory services. This rich clinical experience is supplemented by didactic presentations on practice-related topics. All students participate in the following clerkships:

1. Internal Medicine (12 weeks)
2. Surgery (8 weeks)
3. Pediatrics (8 weeks)
4. Obstetrics/Gynecology (6 weeks)
5. Psychiatry (6 weeks)

6. Neurology (4 weeks)
7. Family Practice (4 weeks)
8. M-III Workshop (1 week)

Total Required Rotations: 8

### **Medicine IV**

#### **M-IV Curriculum**

M-IV is an elective year, with over 200 electives offered. Each elective is four weeks long.

The School of Medicine, in an effort to best serve the needs and goals of the individual student, offers M-IV students the option of choosing electives during the majority of their senior year. The elective curriculum has been arranged primarily to allow those students who have definite goals to pursue them logically without adherence to a required curriculum. At the same time, it allows those who have not yet defined their goals an adequate assortment of electives with which to explore career options. Where standard elective choices seem too limiting, students are encouraged to approach individual faculty members relative to the development of unique courses that more closely approach individual needs. A member of the M-IV Advisory Committee is available to advise each student and to approve each students program.

The year is divided into nine four-week periods. The required rotations, which must be served at the MCV Campus or an affiliated institution such as Inova- Fairfax Hospital or the McGuire Veterans Administration Medical Center, are an acting internship and an emergent care selective in Anesthesia, Emergency Medicine or one of the intensive care units. All students are required to take the year-end Update of Basic Sciences and Clinical Medicine course.

A description of the creation of the M IV schedule, including Electives Guidelines and the policy for Visiting Students is presented in the Senior Electives Catalog section of the School of Medicine Web site.

- Senior Electives Catalog – [www.medschool.vcu.edu/electives](http://www.medschool.vcu.edu/electives)
- Electives Guidelines – [www.medschool.vcu.edu/electives/guidelines.htm](http://www.medschool.vcu.edu/electives/guidelines.htm)
- Visiting Students – [www.medschool.vcu.edu/electives/visiting\\_students.htm](http://www.medschool.vcu.edu/electives/visiting_students.htm)

All students are required to take the U.S. Medical Licensing Examination Step 1 at the end of M-II and Step 2CK by October 15 and Step 2CS by March 31 of the M-IV year. Students are not required to pass the USMLE in order to be promoted or to graduate.

#### **Grading and promotions**

Each students progress toward his/her objectives is evaluated by examination in each area of subject matter and by national board examinations at appropriate times. Grades are assigned as honors, high-pass, pass, marginal or fail. Students receiving marginal or fail grades are counseled. All students are assigned a faculty adviser, available to the student throughout the four years of study.

Students who have attained satisfactory grades in M-I and M-II, but who do not pass U.S. Medical Licensing Examination Step 1, may receive time to study the basic medical sciences during the third school year, prior to their repeating the Step 1 examination. These students will use part of their



fourth year to complete the segments omitted during the study time.

At the close of each academic year, the Promotions Committee, composed of department chairs, recommends to the dean which students have achieved the objectives of the year and which students are qualified for either promotion or graduation. The Promotions Committee is charged to give careful individual attention to all aspects of student achievement, effectiveness, behavior and attitude. The Promotions Committee shall not recommend for promotion any student who has failed to meet the requirements of the preceding year or who appears unfit for the practice of medicine. In consideration of one's fitness for the practice of medicine and in recognition of the critical role of professionalism in being an effective physician, the Promotions Committee shall not recommend for promotion any student who has demonstrated a significant lack of either integrity or professionalism as those concepts are outlined in the School of Medicine Standards of Professional Behavior. When the committee determines by majority vote that a student will not be promoted, it then recommends to the dean remedial activities or dismissal in instances where no remedy is perceived. The dean reviews the recommendations and promptly notifies students that they have been promoted, have to repeat a year or have been dismissed. A student repeating the year is expected to show significant improvement. The Promotions Committee also will meet each January to review the status of all senior students, all third-year students and M.D./Ph.D. candidates. At this meeting, the committee also will review any other students in serious academic difficulty and may choose to take final action, including dismissal, on such students.

An Appeals Committee of three senior faculty members will hear appeals of dismissals when such are filed in writing within 14 days of the students notice of dismissal. A student also may appeal a decision to repeat a year, but such appeals will be reviewed by the Appeals Committee only when it is found that the student will present information not previously available to the Promotions Committee. A student appealing has the right to appear before the Appeals Committee and to have an adviser participate. The dean of the School of Medicine will act upon the recommendation of the Appeals Committee within 14 days of receipt of the committees recommendation.

#### **Withdrawal**

A student may not withdraw from school prior to completion of an academic year unless granted a leave of absence by the dean. A student who leaves without such permission or who fails to return by the end of the granted term of leave is considered dismissed from the class and may return only by applying for possible readmission. Where such a student has demonstrated any academic deficiency, the application is presented to the Promotions Committee.

#### **Requirements for graduation**

The degree of Doctor of Medicine will be conferred by VCU upon candidates who, in the opinion of the medical faculty, have:

- attained the schools educational objectives as evidenced by satisfactory completion of prescribed courses and examinations, by proven clinical skills and responsibilities, and by ethical standards,
- taken Step 1, Step 2CK and Step 2CS of the U.S. Medical Licensing Examination before graduation (April of the M-IV year),
- attended the School of Medicine for a minimum of two years, one of which must be an academic year of clinical rotations, and
- discharged all financial obligations to the university.

It is the policy of the School of Medicine that candidates must be present at commencement exercises unless excused by the dean.

## **Objectives**

### **Knowledge**

The School of Medicine will ensure that before graduation a student will have demonstrated, to the satisfaction of the faculty, the following:

The capacity to recognize the limitations in one's knowledge and clinical skills and to make a commitment to engage in lifelong learning

Knowledge of the normal structure and function of each of the major organ systems of the body and the current basic scientific mechanisms operative at the systemic, cellular, and molecular levels

Knowledge of the various causes (genetic, developmental, metabolic, toxic, microbiologic, immune, psychosocial, neoplastic, traumatic, and degenerative) of illnesses and diseases

Knowledge of the altered structure and function of the body and its major organ systems that are seen in various illnesses and diseases

Knowledge of the scientific method in establishing the causation of disease and efficacy of traditional and non-traditional therapies

Knowledge of health care policy and the economic, psychological, social, and cultural factors that affect health and health care delivery

Knowledge of the most frequent clinical, laboratory, radiographic, and pathologic manifestations of common as well as life threatening diseases

Knowledge about relieving pain and ameliorating the suffering of patients

Knowledge of the epidemiology of diseases and the systematic approaches useful in promoting health

Knowledge of techniques of patient education and counseling in basic lifestyle changes/prevention

Knowledge of and approaches to reduce the psychological and physical risks and stresses of the practice of medicine

### **Skills**

The School of Medicine will ensure that before graduation a student will have demonstrated, to the satisfaction of the faculty, the following:

The ability to obtain an accurate medical history and the ability to perform both a complete and an organ specific examination, including a mental status examination (See appendix A)

The ability to perform routine technical procedures (See appendix B)

The ability to interpret the results and be aware of the indications, complications, and limitations of commonly used diagnostic procedures (See appendix C)

The ability to demonstrate knowledge of theories and principles that govern ethical decision making

The ability to reason deductively and inductively in solving clinical problems

The ability to construct appropriate differential diagnoses and treatment plans for patients with common conditions, both acute and chronic,

including medical, psychiatric, and surgical conditions, and those requiring short- and long-term rehabilitation

The ability to recognize patients with immediate life threatening conditions regardless of etiology, and to institute appropriate initial therapy

The ability to recognize and outline an initial course of management for patients with serious conditions requiring critical care

The ability to communicate effectively, both orally and in writing, with patients, patients' families, colleagues, and others with whom physicians must exchange information in carrying out their responsibilities

The ability to select appropriate tests for detecting patients at risk for specific diseases and to determine strategies for responding appropriately

The ability to retrieve, critically review, and effectively utilize biomedical information from electronic databases and other resources for solving problems and making decisions that are relevant to the care of individuals and populations

The ability to evaluate the economic, psychosocial, and cultural factors that impact the health of patients and families and to incorporate these into assessment and treatment plans

#### Attitudes

**The School of Medicine will ensure that before graduation a student will have demonstrated, to the satisfaction of the faculty, the following:**

A commitment to advocate the interests of one's patients

Compassionate treatment of patients, and respect for their privacy and dignity

Honesty and integrity and dutifulness in all interactions with patients, their families, colleagues, and others with whom physicians interact

An understanding of, and respect for, the roles of other health care professionals, and the need to collaborate with others in caring for patients and promoting health

A commitment to provide care to patients who are unable to pay and to advocate for access to health care for members of underserved populations

#### APPENDIX A

##### HISTORY/PHYSICAL EXAMINATION SKILLS

The graduate will be competent in the performance of comprehensive physical, genetic, functional, and mental status examinations, including:

Comprehensive History – Adult

- a) source and reliability
- b) chief complaint
- c) present illness
- d) past history
- e) current health status (allergies, immunizations, screening tests, environmental hazards, use of safety measures, exercise and leisure, sleep, diet, current medications, tobacco, alcohol, and other substances)
- f) sexual history
- g) family history
- h) psychosocial history
- i) pain assessment
- j) review of systems

- k) risk factors for common illnesses and accidents (presence of guns in house)
- l) preventive measures (suicide, domestic violence)
- m) end of life issues

Comprehensive History – Child and Adolescent

(As per adult history with modifications that take into account age-related differences, the patient's chronological age and state of development, and including relevant data on the following)

- a) birth history (prenatal, natal, and neonatal)
- b) feeding history (breast feeding, infancy, childhood habits)
- c) growth and development (physical growth, developmental milestones, social and educational development)
- d) childhood illnesses
- e) home environment (adequacy of care, risk of accidental injury)

Comprehensive History – Geriatric

(As per adult history with modifications that take into account age-related differences)

- a) preventive measures (fall protection, driving, adequate home lighting)
- b) psychosocial factors (adequacy of care giver support), socialization, isolation
- c) activities of daily living
- d) adequacy of nutrition
- e) review of systems to include continence, special senses
- f) cognitive impairment

General Physical examination including:

- a) vital signs
- b) skin and lymphatics
- c) head, eyes, ears, nose, throat
- d) neck
- e) chest wall and back
- f) heart
- g) lungs
- h) breasts
- i) abdomen
- j) external genitalia, male and female
- k) pelvic
- l) rectal
- m) extremities
- n) joints
- o) pulses and general peripheral vascular exam
- p) complete neurological exam
- q) complete mental status exam
- r) general functional assessment

Special Examinations

- a) pediatric physical examination
- b) psychiatric examination
- c) rapid and focused examination in an emergency situation
- d) geriatric examination

#### APPENDIX B

##### CLINICAL PROCEDURES

The graduate will be competent to personally perform, and will be aware of the indications, complications, and limitations of routine clinical procedures including:



- a) venipuncture, including blood cultures
- b) starting an IV
- c) CPR, basic
- d) arterial puncture (for blood gases)
- e) emergent, temporary immobilization of cervical spine fracture
- f) control of gross external hemorrhage
- g) insert nasogastric tube
- h) work with sterile technique (e.g., gloving, sterile dressing change)
- i) apply temporary/emergency splint
- j) throat swab
- k) suturing lacerations
- l) injections: intradermal, sub-Q, IM, IV
- m) placement of Foley catheter: male, female
- n) incision and drainage of superficial lesions
- o) fluorescein staining and examination of the eye
- p) fecal occult blood
- q) standard and transmission-based precautions for the prevention of transmission of infectious agents

## APPENDIX C

### CLINICAL PROCEDURES

The graduate will be aware of the indications, complication, and limitations of frequently used laboratory and diagnostic tests as well as be able to interpret the written results of these including:

- a) basic radiographic imaging studies
- b) basic cardiac ultrasound and Doppler studies
- c) basic pelvic and abdominal ultrasound
- d) basic noninvasive vascular studies
- e) anatomic pathology
- f) immunologic studies
- g) genetic studies, constructing an appropriate pedigree
- h) EKG and holter monitor study
- i) EEG
- j) EMG
- k) PFTs
- l) spirometry
- m) blood chemistry
- n) hematology
- o) cytology
- p) culture and sensitivities
- q) drug, antibiotic levels
- r) ABGs
- s) coagulation studies
- t) pap smear
- u) stool for ova and parasites
- v) CSF smear
- w) gram stain

The graduate will be aware of the indications, complications, and limitations of more complex or specialized clinical procedures including:

- a) lumbar puncture
- b) endotracheal tube placement
- c) ventilator management
- d) complete ACLS
- e) normal and complicated vaginal deliveries
- f) Cesarean section
- g) thoracentesis
- h) placement of central venous catheter and parenteral nutrition management
- i) casting non-displaced, closed fractures
- j) indirect laryngoscopy
- k) intestinal endoscopy and biopsy
- l) flexible bronchoscopy

- m) insertion of arterial canula
- n) placement of Swan-Ganz catheter
- o) percutaneous organ biopsy
- p) bone marrow aspiration
- q) transtracheal aspiration
- r) joint aspiration
- s) abdominal paracentesis
- t) cardioversion
- u) direct laryngoscopy
- v) tonometry
- w) breast, thyroid mass aspiration
- x) diagnostic peritoneal lavage
- y) reduction of fractures
- z) temporary transvenous pacemaker
- aa) pericardiocentesis
- bb) peritoneal dialysis
- cc) skin biopsy (punch and resection)
- dd) exercise stress testing
- ee) electro-and cryosurgical removal of skin lesions

### School of Medicine Registrar

The School of Medicine houses a Registrar's Office to meet the needs of physician trainees and alumni. Visit the School of Medicine Web site for more information at [www.medschool.vcu.edu/registrar](http://www.medschool.vcu.edu/registrar).

### Criminal background checks

The Association of American Medical Colleges is in the process of developing guidance for Schools of Medicine on the issue of criminal background checks for matriculated students. As we await publication of this policy guidance the School has adopted standards that meet the requirements of associated hospitals and national standards. Attached is the detailed Interim [Criminal Background Check Policy \[pdf\]](#) for the School of Medicine.

### Health policies

Virginia Commonwealth University School of Medicine requires that all medical students carry active health insurance. Health insurance benefits must be equal to or greater than those provided by the university health carrier. In addition, it is required that all students complete required immunizations within six months of matriculation and have repeat tuberculosis screening performed prior to the third-year clerkships. For details related to these policies, please visit [www.medschool.vcu.edu/studentactivities](http://www.medschool.vcu.edu/studentactivities).

### Student organizations

The School of Medicine, through the Office of Student Activities, provides oversight to all of the organizations available to medical students. All student organization are required to register with the Office of Student Activities following established policy and the approved registration format.

For more information, visit the School of Medicine student organizations Web page at [www.medschool.vcu.edu/studentactivities/studentorganizations.htm](http://www.medschool.vcu.edu/studentactivities/studentorganizations.htm).

### Combined Doctor of Medicine (M.D.) and Doctor of Philosophy (Ph.D.)

The M.D./Ph.D. Program seeks to prepare physician-scientists for careers that encompass aspects of health care ranging from the discipline of basic investigation to patient care. The program begins two months prior to the first year of medical school. These students arrive on campus for

orientation and complete two laboratory rotations before the start of medical school classes. They complete the first two years of medical school and, after taking the first part of the U.S. National Medical Licensing Examination, enter a Ph.D.-granting department as a graduate student. Each student must meet the Ph.D. requirements of his or her department for course work, examinations and research. Many of the medical school courses will provide credits for the graduate phase, but students also must take additional graduate-level courses as determined by the dissertation adviser and advisory committee. The main undertaking at this phase is laboratory research that leads to the Ph.D. dissertation. After completion of doctoral degree requirements, students move to the clinical year of medical school. Students may begin their clinical year of medical school immediately after completion of doctoral (Ph.D.) requirements, regardless of the time in the calendar year, and, 14 months later, may complete their medical school requirements. These students are exempt from the major part of the fourth year of medical school.

Prospective students submit applications through the American Medical College Application Service. Upon review of the AMCAS documents, qualified applicants are sent supplemental admission materials, including an application for the M.D./Ph.D. Program. Those invited to Richmond for interviews will take part in the standard interview for the School of Medicine and also will meet with the director of the M.D./Ph.D. Program and one or more academic members of the M.D./Ph.D. Committee.

Admission of medical students to the Ph.D. phase of training takes place formally following completion of the M-II year of M.D. training. A copy of the student file is transferred to the Office of Graduate Education and the individual is formally accepted to Ph.D. training by the VCU Graduate School.

The requirements for a combined professional school/graduate school degree in the School of Medicine are equivalent to those required of students seeking a graduate degree alone and are determined by the individual program. A time limit of seven calendar years for the Ph.D. degree, beginning at the time of first registration in the graduate school, applies to work to be credited toward degrees for students in combined programs.

For additional information, please see the program Web site at [www.vcu.edu/mdphd](http://www.vcu.edu/mdphd)

### Combined Doctor of Medicine (M.D.) and Master of Health Administration (M.H.A.)

Students may indicate their interest in the combined program prior to matriculation or during the first two years of the M.D. program.

Advanced study in health administration and medicine is available through a dual degree program co-sponsored by the department of Health Administration and the VCU School of Medicine. The program leads to the awarding of the Doctor of Medicine and Master of Health Administration degrees. The objective of the M.D./M.H.A. program is to provide highly motivated medical students the expertise for management and leadership competency in complex health care organizations. The program may be completed in five years. Applicants for this program are required to meet the admission requirements of each program. For information regarding the dual degree program, contact the director of the program.

For the combined degree program, course work for the M.H.A. is initiated following completion of the first two or three years of the M.D. program, occupies a full academic year (fall, spring and summer) and extends into a second year and is taken during the third or fourth year of the M.D. program.

Students interested in the program may contact the School of Medicine Office of Curriculum or the Director of the M.H.A. Program, Department of

Health Administration (School of Allied Health Professions).

For additional information refer to the School of Medicine handbook available on the school's Web site at [www.medschool.vcu.edu](http://www.medschool.vcu.edu).

### Combined Doctor of Medicine (M.D.) and Master of Public Health (M.P.H.)

The Department of Epidemiology and Community Health in the School of Medicine offers a program for VCU medical students to obtain a Master of Public Health degree in conjunction with their medical training. The M.D./M.P.H. dual-degree program provides an opportunity for medical students who wish to pursue a public health or research career to graduate from medical school trained in both clinical and preventive, population-oriented medicine.

The objective of the dual-degree M.D./M.P.H. program is to provide high quality and in-depth training in public health to qualified medical students. The five-year program includes four years of medical school and one year of study in the M.P.H. program. During the M.P.H. year students take a minimum of 30 credits of didactic courses. To complete the M.P.H. requirements, students receive 12 credits for successful academic work during the first two years of medical school and take a minimum of one public health elective during the fourth year. Students may register for the M.P.H. year either prior to entering medical school or after the M-III year and prior to M-IV electives. Enrollment in the dual-degree program requires admission into both the School of Medicine and the Graduate School. Students must successfully complete all required course work to receive both degrees at the completion of the five years.

### Curriculum

Typical course plan for M.P.H. year:

	credits
<b>Fall</b>	15
BIOS/STAT 543 Statistical Methods I (3)	
EPID 571 Epidemiology I: Principles of Epidemiology (3)	
EPID 600 Introduction to Public Health (3)	
EPID 602 Public Health Organization and Management (3)	
EPID 604 Principles of Occupational and Environmental Health II (3)	
<b>Spring</b>	12
BIOS/STAT 544 Statistical Methods II (if epidemiology track) (3)	
EPID 603 Public Health Policy and Politics (3)	
EPID 606 Epidemiology II: Epidemiological Methods (3)	
EPID 693 Special Topics Research (3)	
<b>Summer</b>	3
EPID 693 Special Topics Research (3)	

### Anatomy, Doctor of Philosophy (Ph.D.)

#### Admission requirements summary

#### Anatomy, Doctor of Philosophy (Ph.D.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall preferred	Applications received prior to GRE, MCAT or DAT Jan 7 given priority consideration	

#### Special requirements:

MCAT or DAT acceptable in lieu of GRE for combined professional/academic degree programs

Advanced graduate study leading to a Doctor of Philosophy is offered in the Department of Anatomy and Neurobiology. Students may choose a track in anatomical sciences, neurobiology or physical therapy.

## Anatomical Sciences Track

### Admission requirements summary

#### Anatomical Sciences Track

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall preferred	Applications received prior to Jan 7 given priority consideration	GRE, MCAT or DAT

#### Special requirements:

MCAT or DAT acceptable in lieu of GRE for combined professional/academic degree programs

This program is designed for students seeking a doctoral degree with emphasis on the study of anatomical sciences — gross anatomy, embryology, histology and neuroanatomy — whose career objectives include teaching the anatomical disciplines in an academic medical center. The curriculum consists of two years of course work (including a required elective in biochemistry, cell and molecular biology) followed by two to four years of research on an original research project under the supervision of a faculty adviser, a funded neuroscience investigator.

### Curriculum

Fall 1	credits
ANAT 611 Histology	5
ANAT 690 Anatomy Research Seminar	1
ANAT 697 Directed Research in Anatomy	1
BIOC/MICR 503 Biochemistry, Cell and Molecular Biology	5

Spring 1	credits
ANAT 610 Neuroanatomy	5
ANAT 690 Anatomy Research Seminar	1
ANAT 697 Directed Research in Anatomy	4
BIOC/MICR 503 Biochemistry, Cell and Molecular Biology	5

Summer 1	credits
ANAT 697 Directed Research in Anatomy	6

Fall 2	credits
ANAT 609 Gross and Developmental Anatomy	9
ANAT 615 Techniques in Neuroscience and Cell Biology	2
ANAT 690 Anatomy Research Seminar	1
ANAT 697 Directed Research in Anatomy	3

Spring 2	credits
ANAT 690 Anatomy Research Seminar	1
ANAT 691a Special Topics in Anatomy: Embryology	2
ANAT 691b Special Topics in Anatomy: Scientific Writing	2
ANAT 697 Directed Research in Anatomy	3

Students also serve as teaching assistants in histology, gross anatomy and pharmacy anatomy courses.

Students must achieve a grade of B or better in all courses, or they will be required to repeat that course.

### Electives

While no additional electives are required, students are encouraged to

enroll in courses which will enhance their graduate training. Students must maintain a 3.0 overall cumulative grade point average to continue in the doctoral program. Suggested electives include:

	credits
ANAT/PHIS/NEUS/PHTX 509 Cellular and Molecular Neuroscience	3
ANAT 615 Techniques in Neuroscience and Cell Biology	2
BIOS/STAT 543 Statistical Methods I	3
MICR 505 Immunobiology	3
MICR 507 Techniques in Molecular Biology and Genetics	2
MICR 510 Scientific Inquiry	1
PHIS 501 Mammalian Physiology	5
PHIS 604 Cell Physiology	4
PHIS/PHTX 620 Ion Channels in Membranes	3
PHTX 536 Principles of Pharmacology and Toxicology	5
PHTX 632 Neurochemical Pharmacology	3

### Summer following second year

During the summer following the second year the student will take the required written and oral comprehensive exams. Students also register for ANAT 697 Directed Research (6 credits) and work in the research laboratory of their chosen thesis adviser.

### Written comprehensive examination

The written exam consists of two parts. Part one is an open-book exam that is designed to: 1) assess the student's ability to integrate course material and 2) demonstrate critical thinking and evaluation of the literature in the basic health sciences related to the student's area of research. For part two, students will prepare an NIH-style grant proposal based on their research plan.

### Oral comprehensive examination

After successful completion of both parts of the written comprehensive, the student's graduate advisory committee will administer the oral comprehensive examination, which entails an oral defense of the student's grant proposal as well as the topics covered in part one of the written comprehensive. The oral comprehensive covers: (1) course work (anatomy and other basic health sciences) related to the student's proposed research, (2) the literature cited in or related to the proposal, and (3) the hypotheses, research techniques and procedures presented in the proposal. Successful completion of the oral comprehensive exam advances the student to candidacy for the doctoral degree.

### Third academic year and beyond

There is no expectation of the time required to complete the doctoral degree. Beginning with the fall semester of the third year in the graduate program students will devote their full time to conducting research in the laboratory of their advisers. Students also are required to register for 14 credits of ANAT 697 Directed Research in Anatomy and one credit of ANAT 690 Anatomy Research Seminar each semester. During the summer, students register for six credits of ANAT 697.

At the appropriate time in their research, the student will prepare a dissertation and schedule a final oral defense of the thesis. The final oral examination (defense of the dissertation) will be limited to the subject of the candidate's dissertation and related basic science.

### Neurobiology Track

## Admission requirements summary

### Neurobiology Track

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall preferred	Applications received prior to Jan 7 given priority consideration	GRE, MCAT or DAT

#### Special requirements:

MCAT or DAT acceptable in lieu of GRE for combined professional/academic degree programs

This program is designed for students seeking a doctoral degree with emphasis on the study of neuroscience and consists of two years of course work followed by two to four years of research on an original project under the supervision of a faculty adviser, who will be a funded neuroscience investigator.

## Curriculum

Fall 1	credits
ANAT 611 Histology	5
ANAT 690 Anatomy Research Seminar	1
ANAT 697 Directed Research in Anatomy (introductory laboratory rotations)	1
BIOC/MICR 503 Biochemistry, Cell and Molecular Biology	5

Spring 1	credits
ANAT 610 Neuroanatomy	5
ANAT 690 Anatomy Research Seminar	1
ANAT 697 Directed Research in Anatomy (laboratory rotations)	4
BIOC/MICR 504 Biochemistry, Cell and Molecular Biology	5

Summer 1	credits
ANAT 697 Directed Research in Anatomy (in research laboratory with thesis adviser)	6

Fall 2	credits
ANAT/NEUS/PHIS/PHTX 509 Cellular and Molecular Neuroscience	4
ANAT 615 Techniques in Neuroscience and Cell Biology	2
ANAT 690 Anatomy Research Seminar	1
ANAT 697 Directed Research in Anatomy	8

Spring 2	credits
ANAT 690 Anatomy Research Seminar	1
ANAT 691 Special Topics in Anatomy: Scientific Writing	2
ANAT 697 Directed Research in Anatomy	12

Students also serve as teaching assistants in histology, neuroanatomy and pharmacy neuroanatomy courses.

### Electives

While no additional electives are required, students are encouraged to enroll in courses which will enhance their graduate training. Students must maintain a 3.0 overall cumulative grade point average to continue in the doctoral program. Suggested electives include:

	credits
ANAT 609 Gross and Developmental Anatomy	9
ANAT 691 Special Topics in Anatomy: Embryology	2
BIOS/STAT 543 Statistical Methods I	3
MICR 505 Immunobiology	3
MICR 507 Techniques in Molecular Biology and Genetics	2
MICR 510 Scientific Inquiry	1
PHIS 501 Mammalian Physiology	5
PHIS 604 Cell Physiology	4
PHIS/PHTX 620 Ion Channels in Membranes	3
PHTX 536 Principles of Pharmacology and Toxicology	5

## PHTX 632 Neurochemical Pharmacology

3

### Summer following second year

During the summer following the second year the student will take the written and oral comprehensive exams. Students also register for ANAT 697 Directed Research (6 credits) and work in the research laboratory of their chosen thesis adviser.

### Written comprehensive examination

The written exam consists of two parts. Part one is an open-book exam that is designed to: 1) assess the student's ability to integrate course material and 2) demonstrate critical thinking and evaluation of the literature in the basic health sciences related to the student's area of research. For part two, students will prepare an NIH-style grant proposal based on their research plan.

### Oral comprehensive examination

After successful completion of both parts of the written comprehensive, the student's graduate advisory committee will administer the oral comprehensive examination, which entails an oral defense of the student's grant proposal as well as the topics covered in part one of the written comprehensive. The oral comprehensive covers: (1) course work (anatomy and other basic health sciences) related to the student's proposed research, (2) the literature cited in or related to the proposal, and (3) the hypotheses, research techniques and procedures presented in the proposal. Successful completion of the oral comprehensive exam advances the student to candidacy for the doctoral degree.

### Third, year, fall semester

Fall 3	credits
ANAT 617 Developmental Neurobiology	3
ANAT 690 Anatomy Research Seminar	1
ANAT 697 Directed Research in Anatomy	11

Students must achieve a grade of B or better in all courses, or they will be required to repeat that course.

### Third academic year and beyond

There is no expectation of the time required to complete the doctoral degree. Beginning with the spring semester of the third year in the graduate program students will devote their full time to conducting research in the laboratory of their advisers. Students also are required to register for 14 credits of ANAT 697 Directed Research in Anatomy and one credit of ANAT 690 Anatomy Research Seminar each semester. During the summer, students register for six credits of ANAT 697.

At the appropriate time in their research, the student will prepare a dissertation and schedule a final oral defense of the thesis. The final oral examination (defense of the dissertation) will be limited to the subject of the candidate's dissertation and related basic science.

## Physical Therapy Track in Anatomy Ph.D. program

### Admission requirements summary

#### Physical Therapy Track in Anatomy Ph.D. program

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall	Applications received prior to Jan 7 given priority consideration	B.S., M.S. or D.P.T. in Physical Therapy  Contact Physical Therapy or Anatomy for specific admission requirements

The departments of Anatomy and Neurobiology and Physiology of the School of Medicine, together with the Department of Physical Therapy of the School of Allied Health Professions offers Ph.D. programs in anatomy-physical therapy and physiology-physical therapy. The goals of the doctoral programs are to train students in research and educational skills in preparation for students to function as physical therapy faculty members. Application is made to either the Department of Anatomy and Neurobiology or the Department of Physiology. Acceptance into either of the programs requires approval by the admission committees of the cooperating departments. **Graduates receive either the Ph.D. in Anatomy or the Ph.D. in Physiology.**

Students in the Anatomy/Physical Therapy Doctoral Program take required courses within the departments of Anatomy and Neurobiology and Physical Therapy. Students in the Physiology/Physical Therapy Program take required courses within the departments of Physiology and Physical Therapy. (Other courses may be required by the students dissertation committee.) In both programs, the student plans and conducts a research study generally under the direction of a faculty member of the Department of Physical Therapy; however, the dissertation adviser may be from either of the two primary departments. In addition, the student is required to assist in teaching three courses.

In addition to the requirements listed above, admission to either the anatomy/physical therapy or physiology/physical therapy programs requires:

- a minimum of a bachelor's degree,
- graduation from an accredited program in physical therapy (or equivalent, if trained outside the United States) and
- demonstrated clinical experience in physical therapy.

Applicants to the physiology/physical therapy program also are encouraged to have completed at least one course in organic chemistry. Applicants should refer to the departmental Web site for more information or contact:

Dr. Sheryl Finucane, Director of Graduate Studies  
Department of Physical Therapy  
School of Allied Health Professions  
Virginia Commonwealth University  
P.O. Box 980224  
Richmond, VA 23298-0224  
Phone: (804) 828-0234

For additional information about the collaborating departments, refer to their Web sites:

- Department of Physical Therapy
- Department of Anatomy and Neurobiology
- Department of Physiology

## Anatomy, Master of Science (M.S.)

### Admission requirements summary

#### Anatomy, Master of Science (M.S.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.	Fall preferred	Applications received prior to GRE, MCAT or DAT Jan 7 given priority consideration	

#### Special requirements:

MCAT or DAT acceptable in lieu of GRE for combined professional/academic degree programs

Advanced graduate study leading to a Master of Science is offered in the Department of Anatomy and Neurobiology. Students may choose a track in anatomical sciences or neurobiology.

## Anatomical Sciences Track

### Admission requirements summary

#### Anatomical Sciences Track

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.	Fall preferred	Applications received prior to GRE, MCAT or DAT Jan 7 given priority consideration	

#### Special requirements:

MCAT or DAT acceptable in lieu of GRE for combined professional/academic degree programs

This program is designed for students seeking a master's degree with emphasis on the study of the anatomical sciences: gross anatomy, embryology, histology and neuroanatomy. The majority of students in this program will have first completed the one-year Pre-medical Basic Health Science Certificate curriculum, the courses of which meet the prerequisites for the master's program. Students then spend an additional one to two years pursuing laboratory research on an original project under the supervision of a faculty adviser, a funded neuroscience investigator.

### Curriculum

The Master of Science in Anatomy takes approximately two years and requires the same first-year curriculum as that completed by pre-doctoral students with an additional basic health science course offered outside the Department of Anatomy and Neurobiology. Students conduct an original laboratory research project, which is written into a thesis and defended in a final oral exam.

A typical course plan follows:

	credits
<b>Fall 1</b>	
ANAT 609 Gross and Developmental Anatomy	9
ANAT 611 Histology	5
ANAT 690 Anatomy Research Seminar	1
ANAT 697 Directed Research in Anatomy (introductory laboratory presentations)	1
<b>Spring 1</b>	
ANAT 610 Neuroanatomy	5
ANAT 690 Anatomy Research Seminar	1
ANAT 691 Special Topics in Anatomy: Embryology	2
ANAT 697 Directed Research in Anatomy (laboratory rotations)	7
<b>Summer 1</b>	
ANAT 697 Directed Research in Anatomy (in research laboratory with thesis adviser)	6
<b>Fall 2</b>	
ANAT 690 Anatomy Research Seminar	1
ANAT 697 Directed Research in Anatomy	14
Elective from list (or spring)	variable
<b>Spring 2</b>	
ANAT 690 Anatomy Research Seminar	1
ANAT 697 Directed Research in Anatomy	14

**Electives**

ANAT/PHIS/NEUS/PHTX 509 Cellular and Molecular Neuroscience	3
BIOS/STAT 543 Statistical Methods I	3
MICR 505 Immunobiology	3
PHIS 501 Mammalian Physiology	5
PHIS 604 Cell Physiology	4
PHIS/PHTX 620 Ion Channels in Membranes	3
PHTX 536 Principles of Pharmacology and Toxicology	5
PHTX 632 Neurochemical Pharmacology	3

Students must pass all courses with a grade of "B" or better or they will be required to repeat the course. The student must maintain a 3.0 overall cumulative grade point average to continue in the master's program.

There is no expectation of the time required to complete the master's degree; usually two years of study are necessary to complete the requirements. At the appropriate time in their research, students will prepare a thesis and schedule a final oral defense of the thesis. The final oral examination (defense of the thesis) will cover the subject of the candidate's dissertation and related basic science course work.

**Neurobiology Track****Admission requirements summary****Neurobiology Track**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.	Fall preferred	Applications received prior to GRE, MCAT or DAT Jan 7 given priority consideration	

**Special requirements:**

MCAT or DAT acceptable in lieu of GRE for combined professional/academic degree programs

This program is designed for students seeking a master's degree with emphasis on the study of neuroscience. The majority of students in this program will have first completed the one-year Pre-medical Basic Health Science Certificate curriculum, the courses of which meet the prerequisites for the master's program. Students then spend an additional one to two years pursuing laboratory research on an original project under the supervision of a faculty adviser, a funded neuroscience investigator.

**Curriculum**

The Master of Science in Anatomy takes approximately two years and requires the same first three-semester curriculum as that completed by pre-doctoral students. Students conduct an original laboratory research project, which is written into a thesis and defended in a final oral exam.

Fall 1	credits
ANAT 611 Histology	5
ANAT 690 Anatomy Research Seminar	1
ANAT 697 Directed Research in Anatomy	1
BIOC/MICR 503 Biochemistry, Cell and Molecular Biology	5

**Spring 1**

ANAT 610 Neuroanatomy	5
ANAT 690 Anatomy Research Seminar	1
ANAT 697 Directed Research in Anatomy	4
BIOC/MICR 503 Biochemistry, Cell and Molecular Biology	5

**Summer 1**

ANAT 697 Directed Research in Anatomy (in research laboratory with thesis adviser)	6
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**Fall 2**

ANAT/NEUS/PHIS/PHTX 509 Cellular and Molecular Neuroscience	4
ANAT 615 Techniques in Neuroscience and Cell Biology	2
ANAT 690 Anatomy Research Seminar	1
ANAT 697 Directed Research in Anatomy	8

**Spring 2**

ANAT 690 Anatomy Research Seminar	1
ANAT 697 Directed Research in Anatomy	12

Students must pass all courses with a grade of "B" or better or they will be required to repeat the course. The student must maintain a 3.0 overall cumulative grade point average to continue in the master's program.

There is no expectation of the time required to complete the master's degree; usually two years of study are necessary to complete the requirements. At the appropriate time in their research, students will prepare a thesis and schedule a final oral defense of the thesis. The final oral examination (defense of the thesis) will cover the subject of the candidate's dissertation and related basic science course work.

**Biochemistry, Doctor of Philosophy (Ph.D.)****Admission requirements summary****Biochemistry, Doctor of Philosophy (Ph.D.)**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall preferred	Applications received prior to GRE, MCAT or DAT Jan 7 given priority consideration	

**Special requirements:**

MCAT or DAT acceptable in lieu of GRE for combined professional/academic degree programs

The Ph.D. Program in Biochemistry prepares students for research-oriented careers as independent scientists in academia, government and biotechnology. The core of this degree program is an original independent research project under the supervision of a faculty adviser. The Department of Biochemistry and Molecular Biology has research efforts of international stature in several areas, including cellular and molecular signaling, tumor biology, structural biology, eukaryotic molecular biology, lipid and membrane biochemistry, and molecular genetics, using state-of-the-art approaches in enzymology, genomics, proteomics and lipidomics. While emphasizing independent research in biochemistry and molecular biology and training in the responsible conduct of research, the program also provides a background of courses designed to match the needs and interests of each student. A recommended schedule of courses is shown below. Ph.D. students are expected to enroll as full-time graduate students. During the first year, students pursue research rotations, take formal course work and become familiar with current research topics through seminars, discussion groups and lectures by distinguished scientists. By the end of the first year, students choose a faculty adviser and begin dissertation research. Following completion of the research project and defense of the doctoral dissertation, graduates are equipped to participate in virtually any area of current biomedical research in the most prestigious laboratories. For more detailed information on the program, please visit [www.vcu.edu/biochem/students/phd.shtml](http://www.vcu.edu/biochem/students/phd.shtml).

**Curriculum**

Typical course plan for full-time student

	credits
<b>Fall 1</b>	
BIOC/MICR 503 Biochemistry, Cell and Molecular Biology	5



BIOC 505 Experimental Biochemistry (rotation)	2
BIOC 690 Biochemistry Seminar	1
BIOC 691.901 Special Topics in Biochemistry	1
BIOC 697 Directed Research in Biochemistry	variable
MICR 512 Laboratory Safety	1

**Spring 1**

BIOC 504 Biochemistry, Cell and Molecular Biology	5
BIOC 505 Experimental Biochemistry (rotation)	2
BIOC 602 Physical Properties of Macromolecules	3
BIOC 690 Biochemistry Seminar	1
BIOC 691.901 Special Topics in Biochemistry	1
BIOC 697 Directed Research in Biochemistry	variable

**Summer 1**

BIOC 505 Experimental Biochemistry (rotation)	2
BIOC 697 Directed Research in Biochemistry	6

**Fall 2**

BIOC 604 Enzymology	3
BIOC 605 Molecular Biology (elective)	3
BIOC 690 Biochemistry Seminar	1
BIOC 691.901 Special Topics in Biochemistry	1
BIOC 697 Directed Research in Biochemistry	variable
MICR 510 Scientific Integrity	1

**Spring 2**

BIOC 606 Biochemical Control Processes (elective)	3
BIOC 690 Biochemistry Seminar	1
BIOC 691.901 Special Topics in Biochemistry	1
BIOC 697 Directed Research in Biochemistry	variable

Ph.D. students register for BIOC 690 and BIOC691.901 for the duration of their tenure in the program. The core set of required courses can be supplemented with elective courses offered by the Department of Biochemistry and Molecular Biology or other departments. Students are encouraged to take additional courses that relate to their personal research project. Electives may include courses in techniques in molecular biology and genetics, bioinformatics, statistics, immunology, microbiology, molecular genetics, mammalian physiology, advanced organic and physical chemistry, among others.

## Biochemistry, Master of Science (M.S.)

### Admission requirements summary

**Biochemistry, Master of Science (M.S.)**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.	Fall preferred	Applications received prior to Jan 7 given priority consideration	GRE, MCAT or DAT

**Special requirements:**

MCAT or DAT acceptable in lieu of GRE for combined professional/academic degree programs

The M.S. Program in Biochemistry prepares students for research-oriented careers in academia, government and biotechnology. The core of this degree program is an original independent research project under the supervision of a faculty adviser. The Department of Biochemistry and Molecular Biology has research efforts of international stature in several areas, including cellular and molecular signaling, tumor biology, structural biology, eukaryotic molecular biology, lipid and membrane biochemistry, and molecular genetics, using state-of-the-art approaches in enzymology, genomics, proteomics and lipidomics. While emphasizing independent research in biochemistry and molecular biology and training in the responsible conduct of research, the program also provides a background

of courses designed to match the needs and interests of each student. A recommended schedule of courses is shown below. During the first year, students pursue research rotations, take formal course work and become familiar with current research topics through seminars, discussion groups and lectures by distinguished scientists. By the end of the first year, students choose a faculty adviser and begin thesis research. Following completion of the research project and defense of the masters thesis, graduates are equipped to participate in virtually any area of current biomedical research in the most prestigious laboratories. For more detailed information on the program, please visit [www.vcu.edu/biochem/students/ms.shtml](http://www.vcu.edu/biochem/students/ms.shtml).

## Curriculum

Typical course plan for full-time student

	credits
<b>Fall 1</b>	
BIOC/MICR 503 Biochemistry, Cell and Molecular Biology	5
BIOC 505 Experimental Biochemistry (rotation)	2
BIOC 690 Biochemistry Seminar	1
BIOC 691.901 Special Topics in Biochemistry	1
BIOC 697 Directed Research in Biochemistry	variable
MICR 512 Laboratory Safety	1
<b>Spring 1</b>	
BIOC 504 Biochemistry, Cell and Molecular Biology	5
BIOC 602 Physical Properties of Macromolecules	3
BIOC 606 Biochemical Control Processes	3
BIOC 690 Biochemistry Seminar	1
BIOC 691.901 Special Topics in Biochemistry	1
BIOC 697 Directed Research in Biochemistry	variable
<b>Summer 1</b>	
BIOC 697 Directed Research in Biochemistry	6
<b>Fall 2</b>	
BIOC 604 Enzymology	3
BIOC 605 Molecular Biology (elective)	3
BIOC 690 Biochemistry Seminar	1
BIOC 691.901 Special Topics in Biochemistry	1
BIOC 697 Directed Research in Biochemistry	variable
MICR 510 Scientific Integrity	1
<b>Spring 2</b>	
BIOC 690 Biochemistry Seminar	1
BIOC 691.901 Special Topics in Biochemistry	1
BIOC 697 Directed Research in Biochemistry	variable

M.S. students register for BIOC 690 and BIOC691.901 for the duration of their tenure in the program. The core set of required courses can be supplemented with elective courses offered by the Department of Biochemistry and Molecular Biology or other departments. Students are encouraged to take additional courses that relate to their personal research project. Electives may include courses in techniques in molecular biology and genetics, bioinformatics, statistics, immunology, microbiology, molecular genetics, mammalian physiology, advanced organic and physical chemistry, among others.

## Biostatistics, Doctor of Philosophy (Ph.D.)

### Admission requirements summary

**Biostatistics, Doctor of Philosophy (Ph.D.)**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall preferred	Applications received prior to Jan 7 given priority consideration	GRE, MCAT or DAT

**Special requirements:**

Contact department for Biostatistics brochure

MCAT or DAT acceptable in lieu of GRE for combined professional/academic degree programs

## Biostatistics, Master of Science (M.S.)

### Admission requirements summary

**Biostatistics, Master of Science (M.S.)**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.	Fall preferred	Applications received prior to Jan 7 given priority consideration	GRE, MCAT or DAT

**Special requirements:**

Contact department for Biostatistics brochure

MCAT or DAT acceptable in lieu of GRE for combined professional/academic degree programs

## Combined Master of Social Work (M.S.W.) and Master of Public Health (M.P.H.)

### Admission requirements summary

**Combined Master of Social Work (M.S.W.) and Master of Public Health (M.P.H.)****Public Health, Master of (M.P.H.)**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.P.H.	Fall	Priority given to applications received by Apr 1 Applications reviewed on a rolling basis until class is filled	GRE

**Special requirements:**

Students applying to joint M.D./M.P.H. program should be accepted to the VCU School of Medicine prior to applying to the M.D./M.P.H. program

MCAT or DAT acceptable in lieu of GRE for combined professional/academic degree programs

**Social Work, Master of (M.S.W.)**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.W.	<b>Regular Standing</b> Full-time – Fall Part-time – Fall	Feb 1 Feb 1	
	<b>Advanced Standing</b> Summer only – Richmond campus	Dec 1	

**Special requirements:**

If applying for off-campus program for concentration year, indicate location in item 5 on application

See Social Work [Web site](#) for supplemental academic information form.

Through a collaborative program between the VCU School of Social Work and the School of Public Health, students complete a three-year full-time program of study, including some summer course work, to obtain the Master of Social Work and Master of Public Health degrees. The purpose of this dual-degree program is to prepare graduates to work with individuals, families, groups, communities and/or organizations; advocate for social, health care and economic justice in a diverse and multicultural society; and promote physical and mental health across the life course.

Prospective students apply separately to both programs through the Graduate School. Once admitted to both programs, the student is assigned an adviser from each to develop a plan of study, typically starting with the M.S.W. course work. Students who begin one of the degree programs may also apply to the other during the first year of study. If admitted, an individualized program of study is developed and approved by both program directors.

Students are required to complete a minimum of 45 M.S.W. credits and a minimum of 33 M.P.H. credits, for a total of 78 semester credit hours. During the third and last year of study, the dual-degree students are placed in internships through the School of Social Work that focus on public health; the program is approved by both the M.P.H. program director and the director of social work field instruction. A final research project that examines a relevant public health topic is required for the M.P.H.

## Epidemiology, Doctor of Philosophy (Ph.D.)

### Admission requirements summary

**Epidemiology, Doctor of Philosophy (Ph.D.)**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall preferred	Applications received by Jan 31 given priority consideration	GRE

**Special requirements:**

M.P.H. or equivalent M.S. degree

The Ph.D. program in epidemiology, the only one of its kind in Virginia, prepares students for research-oriented careers in the areas of clinical and population-based research. The program includes a foundation of 41 credits of epidemiology and biostatistics course work whereby students learn methods for studying disease etiology and prevention in populations. Students then implement such methods in an original research project under the supervision of an experienced faculty adviser.

### Sample curriculum

	credits
<b>Fall 1</b>	
BIOS 553 Applied Statistics	3
EPID 690 Journal Club	1
Electives	6
<b>Total</b>	10
<b>Spring 1</b>	
BIOS 554 Applied Statistics	3
EPID 690 Journal Club	1
PPAD 723 Survey Research Methods	3
Elective	3
<b>Total</b>	10
<b>Summer 1</b>	
STAT 623 Discrete Multivariate Analysis*	3
EPID/BIOS elective	3
<b>Total</b>	6



<b>Fall 2</b>	
BIOS 631 Multivariate Analysis I	4
Electives	6
<b>Total</b>	10

<b>Spring 2</b>	
EPID 642 Advanced Epidemiological Protocol Design	3
EPID 697 Directed Research in Epidemiology	variable
Elective	variable
<b>Total</b>	5

<b>Summer 2</b>	
EPID 697 -- Research	variable

\* Offered every other year

## Genetic Counseling, Master of Science (M.S.)

### Admission requirements summary

#### Genetic Counseling, Master of Science (M.S.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.	Fall	Applications received prior to Feb 15 given GRE priority consideration	

The Master of Science in Genetic Counseling program is accredited by the American Board of Genetic Counseling. The master's degree requires four semesters of study for students entering with a bachelor's degree, and it must be completed within five years. The student working toward the Master of Science has an integrated and progressively complex classroom and supervised clinical experience. The program requires an original research project under the supervision of a faculty adviser.

The straddling of the student and professional roles is a lifelong process in the changing field of human genetics and genetic counseling. Graduates of this program will be contributing members of the clinical genetics team of counselors, physicians and basic scientists.

### Curriculum

Sample typical course plan for the full-time student

<b>Fall 1</b>	credits
CLED 601 Theories of Counseling	3
HGEN 501/BIOL 530 Human Genetics	3
HGEN 525 Practice of Genetic Counseling	3
HGEN 690 Genetics Research Seminar	1
HGEN 691 Special Topics in Genetics: Cytogenetics	2
HGEN 691 Special Topics in Genetics: Bayesian Analysis	1
<b>Total</b>	13

<b>Spring 1</b>	
HGEN 526 Practice of Genetic Counseling	3
HGEN 600 Clinical Genetics	3
HGEN 603 Mathematical and Statistical Genetics	3
HGEN 690 Genetics Research Seminar	1
PSYC 620 Design and Analysis of Psychological Research	3
Elective	3
<b>Total</b>	16

<b>Summer</b>	
HGEN 502 Advanced Human Genetics (laboratory rotation)	2
HGEN 600 Clinical Genetics	3
<b>Total</b>	5

<b>Fall 2</b>	
HGEN 527 Medical Genetics	3
HGEN 600 Clinical Genetics	3
HGEN 614 Human Biochemical and Molecular Genetics	3
HGEN 690 Genetics Research Seminar	1
HGEN 697 Directed Research in Genetics	3
Elective	3
<b>Total</b>	16

<b>Spring 2</b>	
ANAT 691 Special Topics in Anatomy: Embryology	2
HGEN 528 Medical Genetics	3
HGEN 600 Clinical Genetics	3
HGEN 622 Cancer Genetic Counseling	3
HGEN 690 Genetics Research Seminar	1
HGEN 697 Directed Research in Genetics	3
<b>Total</b>	15

For additional information on the program please visit [www.gen.vcu.edu](http://www.gen.vcu.edu).

## Combined Master of Science in Genetic Counseling (M.S.) and Doctor of Philosophy in Human Genetics (Ph.D.)

#### Human Genetics, Doctor of Philosophy (Ph.D.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall	Applications received prior to GRE Jan 7 given priority consideration	

#### Special requirements:

International applicants must score 600 or greater on the TOEFL

MCAT or DAT acceptable in lieu of GRE for combined professional/academic degree programs

#### Genetic Counseling, Master of Science (M.S.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.	Fall	Applications received prior to Feb 15 given GRE priority consideration	

The Department of Human Genetics offers training that combines preparation for a career as a genetic counselor with research-based doctoral training in a coordinated program that integrates the complementary aspects of these two degree categories.

The Master of Science in Genetic Counseling program is accredited by the American Board of Genetic Counseling. The master's degree requires four semesters of study for students entering with a bachelor's degree, and it must be completed within five years. The student working toward the Master of Science has an integrated and progressively complex classroom and supervised clinical experience. The program requires an original research project under the supervision of a faculty adviser.

The straddling of the student and professional roles is a lifelong process in the changing field of human genetics and genetic counseling. Graduates of this program will be contributing members of the clinical genetics team of counselors, physicians and basic scientists.

## Human Genetics, Doctor of Philosophy (Ph.D.)

### Admission requirements summary

#### Human Genetics, Doctor of Philosophy (Ph.D.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall	Applications received prior to GRE Jan 7 given priority consideration	

**Special requirements:**

International applicants must score 600 or greater on the TOEFL

MCAT or DAT acceptable in lieu of GRE for combined professional/academic degree programs

The Department of Human Genetics offers a comprehensive program in graduate study leading to a Doctor of Philosophy (Ph.D.) in Human Genetics. The program includes the completion of an original research project under the supervision of a faculty adviser and a background/foundation of courses that prepare students for research-oriented careers in the rapidly expanding field of human genetics. Major areas of study available to Ph.D. students in the program include clinical and molecular cytogenetics, molecular genetics, developmental genetics, cancer genetics, behavior genetics, population and quantitative genetics, genetic epidemiology, clinical genetics, and genetic counseling. Once core course work requirements have been completed, the students course plan is tailored to meet individual needs with regard to the area of research focus. A track in [genetic epidemiology](#) is available for those planning a career in this area. For more detailed information on the program please visit [www.gen.vcu.edu/phd](http://www.gen.vcu.edu/phd).

## Curriculum

Typical course plan for the full-time student

	credits
<b>Fall 1</b>	
BIOC/MICR 503 Biochemistry	5
BIOS/STAT 543 Biostatistics	3
HGEN 501/BIOL 530 Human Genetics	3
HGEN 502 Advanced Human Genetics (laboratory rotation)*	2
HGEN 614 Human Biochemical and Molecular Genetics	3
HGEN 690 Genetics Research Seminar	1
HGEN 691 Special Topics in Genetics – Classic Papers in Human Genetics	1
<b>Total</b>	15

\*For the laboratory rotation, the student and faculty member will design a project that can reasonably be completed in eight weeks. The student will spend approximately eight weeks in that lab for a minimum of eight hours/week. The student's performance in the laboratory will serve as the basis for the grade that is received for this course.

<b>Spring 1</b>	
BIOC/MICR 504 Biochemistry	5
BIOS/STAT 544 Biostatistics	3
HGEN 502 Laboratory Rotation	2
HGEN 603 Introduction to Mathematical/Statistical Genetics	3
HGEN 690 Genetics Research Seminar	1
HGEN 691 Special Topics in Genetics – Clinical Genetics Overview	1
<b>Total</b>	15

<b>Summer 1</b>	
HGEN 600 Clinical Genetics (optional)	3
HGEN 697 Directed Research in Genetics (lab rotation)	3
<b>Total</b>	3-6

<b>Fall 2</b>	
HGEN 511 Human Cytogenetics	3

HGEN 690 Genetics Research Seminar	1
HGEN 691 Special Topics in Genetics – Bayesian Recurrence Risks	1
HGEN 697 Directed Research in Genetics	3
MICR 510 Scientific Integrity	1
Electives	6
<b>Total</b>	15

**Spring 2**

HGEN 697 Directed Research in Genetics	9-15
Elective	0-6
<b>Total</b>	15

Fifteen additional credit hours will be taken in HGEN 697 after the second spring semester.

Additional information on the program can be found online at [www.gen.vcu.edu/phd](http://www.gen.vcu.edu/phd).

## Genetic Epidemiology track

### Admission requirements summary

**Genetic Epidemiology track**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall	Applications received prior to GRE Jan 7 given priority consideration	

**Special requirements:**

International applicants must score 600 or greater on the TOEFL

MCAT or DAT acceptable in lieu of GRE for combined professional/academic degree programs

## Curriculum

Typical course plan for the full-time student in the genetic epidemiology track

	credits
<b>Fall 1</b>	
BIOC/MICR 503 Biochemistry	5
BIOS/STAT 543 Biostatistics	3
HGEN 501/BIOL 530 Human Genetics	3
HGEN 502 Advanced Human Genetics (laboratory rotation)*	2
HGEN 614 Human Biochemical and Molecular Genetics (or elective)	3
HGEN 690 Genetics Research Seminar	1
HGEN 691 Special Topics in Genetics – Classic Papers in Human Genetics	1
<b>Total</b>	15

\*For the laboratory rotation, the student and faculty member will design a project that can reasonably be completed in eight weeks. The student will spend approximately eight weeks in that lab for a minimum of eight hours/week. The student's performance in the laboratory will serve as the basis for the grade that is received for this course.

<b>Spring 1</b>	
BIOS/STAT 544 Biostatistics	3
HGEN 502 Laboratory Rotation	2
HGEN 603 Introduction to Mathematical/Statistical Genetics	3
HGEN 690 Genetics Research Seminar	1
HGEN 691 Special Topics in Genetics – Clinical Genetics Overview	1

HGEN 697 Directed Research in Genetics	2
Elective	3
<b>Total</b>	<b>15</b>

**Summer 1**

HGEN 697 Directed Research in Genetics (lab rotation)	6
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**Fall 2**

HGEN 511 Human Cytogenetics (or elective)	3
HGEN 619 Quantative Genetics	3
HGEN 690 Genetics Research Seminar	1
HGEN 691 Special Topics in Genetics – Bayesian Recurrence Risks	1
HGEN 697 Directed Research in Genetics	3
MICR 510 Scientific Integrity	1
Elective	3
<b>Total</b>	<b>15</b>

**Spring 2**

HGEN 697 Directed Research in Genetics	9-15
Elective	0-6
<b>Total</b>	<b>15</b>

Fifteen additional credit hours will be taken in HGEN 697 after the second spring semester.

Additional information on the program can be found online at [www.gen.vcu.edu/phd](http://www.gen.vcu.edu/phd).

## Combined Master of Science in Genetic Counseling (M.S.) and Doctor of Philosophy in Human Genetics (Ph.D.)

**Human Genetics, Doctor of Philosophy (Ph.D.)**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall	Applications received prior to GRE Jan 7 given priority consideration	

**Special requirements:**

International applicants must score 600 or greater on the TOEFL

MCAT or DAT acceptable in lieu of GRE for combined professional/academic degree programs

**Genetic Counseling, Master of Science (M.S.)**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.	Fall	Applications received prior to Feb 15 given GRE priority consideration	

The Department of Human Genetics offers training that combines preparation for a career as a genetic counselor with research-based doctoral training in a coordinated program that integrates the complementary aspects of these two degree categories.

The Master of Science in Genetic Counseling program is accredited by the American Board of Genetic Counseling. The master's degree requires four semesters of study for students entering with a bachelor's degree, and it must be completed within five years. The student working toward the Master of Science has an integrated and progressively complex classroom and supervised clinical experience. The program requires an original research project under the supervision of a faculty adviser.

The straddling of the student and professional roles is a lifelong process in the changing field of human genetics and genetic counseling. Graduates of this program will be contributing members of the clinical genetics team of counselors, physicians and basic scientists.

## Human Genetics, Master of Science (M.S.)

### Admission requirements summary

**Human Genetics, Master of Science (M.S.)**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.	Fall	Applications received prior to GRE Jan 7 given priority consideration	

**Special requirements:**

International applicants must score 600 or greater on the TOEFL

MCAT or DAT acceptable in lieu of GRE for combined professional/academic degree programs

The Department of Human Genetics offers a comprehensive program in graduate study leading to a Master of Science in Human Genetics. The program includes the completion of an original research project under the supervision of a faculty adviser and a background/foundation of courses that prepare students for research-oriented careers in the rapidly expanding field of human genetics. Major areas of study available to master's students in the program include clinical and molecular cytogenetics, molecular genetics, developmental genetics, cancer genetics, behavior genetics, population and quantitative genetics, genetic epidemiology, clinical genetics, and genetic counseling.

### Curriculum

Typical course plan for the full-time student

	credits
<b>Fall 1</b>	
BIOC/MICR 503 Biochemistry	5
BIOS/STAT 543 Biostatistics	3
HGEN 501/BIOL 530 Human Genetics	3
HGEN 502 Advanced Human Genetics (laboratory rotation)*	2
HGEN 614 Human Biochemical and Molecular Genetics	3
HGEN 690 Genetics Research Seminar	1
HGEN 691 Special Topics in Genetics – Classic Papers in Human Genetics	1
<b>Total</b>	<b>15</b>

\*For the laboratory rotation, the student and faculty member will design a project that can reasonably be completed in eight weeks. The student will spend approximately eight weeks in that lab for a minimum of eight hours/week. The student's performance in the laboratory will serve as the basis for the grade that is received for this course.

**Spring 1**

BIOC/MICR 504 Biochemistry	5
BIOS/STAT 544 Biostatistics	3
HGEN 502 Laboratory Rotation	2
HGEN 603 Introduction to Mathematical/Statistical Genetics	3
HGEN 690 Genetics Research Seminar	1
HGEN 691 Special Topics in Genetics – Clinical Genetics Overview	1
<b>Total</b>	<b>15</b>

**Summer 1**

HGEN 697 Directed Research in Genetics (lab rotation)	3-6
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**Fall 2**

HGEN 511 Human Cytogenetics	3
HGEN 690 Genetics Research Seminar	1
HGEN 691 Special Topics in Genetics – Bayesian Recurrence Risks	1
HGEN 697 Directed Research in Genetics	9
MICR 510 Scientific Integrity	1
<b>Total</b>	<b>15</b>

**Spring 2**

HGEN 697 Directed Research in Genetics	15
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If needed, six additional credit hours may be taken in HGEN 697 after the second spring semester.

Additional information on the program can be found online at [www.gen.vcu.edu](http://www.gen.vcu.edu).

## Microbiology and Immunology, Doctor of Philosophy (Ph.D.)

### Admission requirements summary

#### Microbiology and Immunology, Doctor of Philosophy (Ph.D.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall preferred	Applications received prior to Jan 7 given priority consideration	GRE or MCAT

#### Special requirements:

Combined GRE Verbal and Quantitative Score of 1200 or greater, MCAT score of 26 or greater

International applicants must score great than 600 (paper), greater than 250 (computer) on TOEFL

MCAT acceptable in lieu of GRE for combined professional/academic degree programs

The Department of Microbiology and Immunology has an outstanding faculty with diverse research interests that include cell and molecular biology, molecular genetics, molecular pathogenesis, bacteriology, immunology, immunotoxicology, virology, parasitology, mycology, and oncology. The goal of the graduate program is to prepare students to become creative problem solvers and leaders in scientific research. The Ph.D. degree is offered, as well as an M.D./Ph.D. degree for medical students interested in academic or research careers.

The research experience is complemented with excellent course offerings, seminar programs, teaching opportunities, presentations at scientific meetings and writing of grant applications and scientific papers. Graduate students acquire a wide range of research experience in the first year through exposure to a variety of research laboratories and investigators. The student chooses a research adviser and then carries out an original, independent research project under the direction of the adviser. The project falls under the review of an advisory committee, and a written dissertation is defended in a final oral examination. For more detailed information on the program please visit [www.vcu.edu/micro](http://www.vcu.edu/micro).

### Curriculum

	credits
<b>Semester 1 – fall</b> (taken by all first-year students)	
Temporary adviser chosen	
MICR/BIOC 503 Biochemistry, Cell and Molecular Biology	5
MICR 505 Immunobiology	3
MICR 508 Introduction to Microbiology and Immunology Research (two rotations/principle investigator lectures)	3

MICR 512 Laboratory Safety	1
MICR 515 Principles of Molecular Microbiology	3
MICR 690 Microbiology Research Seminar (attendance required)	1

**Semester 2 – spring**

MICR/BIOC 504 Biochemistry, Cell and Molecular Biology	5
MICR 509 Introduction to Microbiology and Immunology Research (two rotations)	3
MICR 516 Mechanisms of Viral and Parasite Pathogenesis*	3
MICR 518 Molecular Mechanisms of Bacterial Pathogenesis*	3
MICR 686 Advanced Immunobiology*	2
MICR 690 Microbiology Research Seminar – Group (attendance required)	1
MICR 690 Microbiology Research Seminar – Departmental (attendance required)	1
* students take two of three classes	
Cumulative GPA of 3.0 required to continue; permanent adviser chosen after three rotations completed.	

**Semesters 3 and 4 – fall/spring**

MICR 507 Techniques in Molecular Biology and Genetics	2
MICR 510 Scientific Integrity	1
MICR 690 Microbiology Research Seminar – Group (attendance required)	1
MICR 690 Microbiology Research Seminar – Departmental (attendance required)	1
MICR 691 Special Topics in Microbiology – Journal Club (graded Pass/Fail)	1
MICR 697 Directed Research in Microbiology	variable

**Optional electives**

MICR 606 Molecular Biology and Genetics	3
MICR/BNFO 653 Advanced Molecular Genetics: Bioinformatics	3
Student's GAC formed, first meeting held in the fall; written examination in the spring.	

**Semesters 5 and 6 – fall/spring**

MICR 690 Microbiology Research Seminar – Group (attendance required)	1
MICR 690 Microbiology Research Seminar – Departmental (attendance required)	1
MICR 691 Special Topics in Microbiology – Journal Club (graded Pass/Fail)	1
MICR 697 Directed Research in Microbiology	variable
Oral examination	

**Semesters 7 and 8 – fall/spring**

MICR 690 Microbiology Research Seminar – Group (attendance required)	1
MICR 690 Microbiology Research Seminar – Departmental (attendance required)	1
MICR 691 Special Topics in Microbiology – Journal Club (graded Pass/Fail)	1
MICR 697 Directed Research in Microbiology	variable

**Semesters 9 and 10 – fall/spring**

MICR 690 Microbiology Research Seminar – Group (attendance required)	1
MICR 690 Microbiology Research Seminar – Departmental (attendance required)	1
MICR 691 Special Topics in Microbiology – Journal Club (graded Pass/Fail)	1
MICR 697 Directed Research in Microbiology	variable
Thesis defense	

## Microbiology and Immunology, Master of Science (M.S.)

### Admission requirements summary



**Microbiology and Immunology, Master of Science (M.S.)**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.	Fall preferred	Applications received prior to Jan 7 given priority consideration	GRE or MCAT

**Special requirements:**

Combined GRE Verbal and Quantitative Score of 1200 or greater, MCAT score of 26 or greater

International applicants must score great than 600 (paper), greater than 250 (computer) on TOEFL

MCAT acceptable in lieu of GRE for combined professional/academic degree programs

The Department of Microbiology and Immunology has an outstanding faculty with diverse research interests that include cell and molecular biology, molecular genetics, molecular pathogenesis, bacteriology, immunology, immunotoxicology, virology, parasitology, mycology, and oncology. The goal of the graduate program is to prepare students to become creative problem solvers and leaders in scientific research. The Master of Science degree is offered, as well as a Ph.D., and an M.D./Ph.D. degree for medical students interested in academic or research careers.

The research experience is complemented with excellent course offerings, seminar programs, teaching opportunities, presentations at scientific meetings and writing of grant applications and scientific papers. Graduate students acquire a wide range of research experience in the first year through exposure to a variety of research laboratories and investigators. The student chooses a research adviser and then carries out an original, independent research project under the direction of the adviser. The project falls under the review of an advisory committee, and a written dissertation is defended in a final oral examination. For more detailed information on the program please visit [www.vcu.edu/micro](http://www.vcu.edu/micro).

**Curriculum**

	credits
<b>Semester 1 – fall</b> (taken by all first-year students)	
Temporary adviser chosen	
MICR/BIOC 503 Biochemistry, Cell and Molecular Biology	5
MICR 505 Immunobiology	3
MICR 508 Introduction to Microbiology and Immunology Research (two rotations/principle investigator lectures)	3
MICR 512 Laboratory Safety	1
MICR 515 Principles of Molecular Microbiology	3
MICR 690 Microbiology Research Seminar (attendance required)	1
<b>Semester 2 – spring</b>	
MICR/BIOC 504 Biochemistry, Cell and Molecular Biology	5
MICR 509 Introduction to Microbiology and Immunology Research (two rotations)	3
MICR 516 Mechanisms of Viral and Parasite Pathogenesis*	3
MICR 518 Molecular Mechanisms of Bacterial Pathogenesis*	3
MICR 686 Advanced Immunobiology*	2
MICR 690 Microbiology Research Seminar – Group (attendance required)	1
MICR 690 Microbiology Research Seminar – Departmental (attendance required)	1
* students take two of three classes	
Cumulative GPA of 3.0 required to continue; permanent adviser chosen after three rotations completed.	
<b>Semesters 3 and 4 – fall/spring</b>	
MICR 507 Techniques in Molecular Biology and Genetics	2
MICR 510 Scientific Integrity	1
MICR 690 Microbiology Research Seminar – Group (attendance required)	1
MICR 690 Microbiology Research Seminar – Departmental (attendance required)	1

MICR 691 Special Topics in Microbiology – Journal Club (graded Pass/Fail)	1
MICR 697 Directed Research in Microbiology	variable
<b>Optional electives</b>	
MICR 606 Molecular Biology and Genetics	3
MICR/BNFO 653 Advanced Molecular Genetics: Bioinformatics	3
Student's GAC formed, first meeting held in the fall; written examination in the spring.	
<b>Semesters 5 and 6 – fall/spring</b>	
MICR 690 Microbiology Research Seminar – Group (attendance required)	1
MICR 690 Microbiology Research Seminar – Departmental (attendance required)	1
MICR 691 Special Topics in Microbiology – Journal Club (graded Pass/Fail)	1
MICR 697 Directed Research in Microbiology	variable
Oral examination/thesis defense	

## **Molecular Biology and Genetics, interdisciplinary doctoral curricula with Biochemistry, Human Genetics, Microbiology and Immunology, and Pharmacology and Toxicology**

The molecular biology and genetics curriculum is an integrated interdisciplinary program of study that builds on the graduate programs of participating departments in the School of Medicine. The core curriculum is specifically designed to provide a strong foundation in biochemistry, cell biology and molecular genetics, culminating in the conduct of an original research project under the supervision of a faculty adviser. Electives drawn from various departments allow individual specialization. The departments through which a Ph.D. with a concentration in molecular biology and genetics can be pursued include Biochemistry, Human Genetics, Microbiology and Immunology, and Pharmacology and Toxicology. Participating faculty are associated not only with programs and departments within the School of Medicine, but also VCU Massey Cancer Center, Philips Institute for Oral and Craniofacial Molecular Biology (School of Dentistry), Institute of Structural Biology and Drug Discovery (School of Pharmacy) and the VCU Center for the Study of Biological Complexity (VCU Life Sciences). The interdisciplinary approach to the solution of biological problems provided by this training is designed to teach students the flexibility and problem-solving skills necessary for success in a variety of scientific research-oriented career opportunities.

All students are required to satisfy the core curriculum requirements, which are supplemented with electives appropriate to the individual research program area and with directed research under the supervision of the thesis adviser. The core curriculum consists of the following courses, most of which are taken during the first two years of graduate study:

**Core curriculum**

	credits
BIOC/MICR 503-504 Biochemistry, Cell and Molecular Biology	10
BIOC 602 Physical Properties of Macromolecules	2
BIOC 605 Molecular Biology	3
or	
HGEN 614 Human Biochemical and Molecular Genetics	
or	
PATH 670 Experimental Approaches to Tumor Biology	
or	
PHTX 625 Cell Signaling and Growth Control	
MICR 507 Techniques in Molecular Biology and Genetics	2
MICR 508-509 Introduction to Microbiology and Immunology Research	6
MICR 510 Scientific Integrity	1
MICR 512 Laboratory Safety	1

MICR 605 Prokaryotic Molecular Genetics	3
MICR 690 Microbiology Research Seminar (every semester)	1
MICR 691 Special Topics in Microbiology – MBG Journal Club (must take at least twice)	1

## **Molecular Biology and Genetics, interdisciplinary master's curricula with Biochemistry, Human Genetics, Microbiology and Immunology, and Pharmacology and Toxicology**

The molecular biology and genetics curriculum is an integrated interdisciplinary program of study that builds on the graduate programs of participating departments in the School of Medicine. The master's program is designed to be an intensive course of study that will prepare students for research-oriented careers in biotechnology or provide the foundation for further graduate study toward a Ph.D. It is expected that the program should be completed in approximately two to two-and-one-half years. The curriculum includes core, specialization and elective courses. Electives drawn from various departments allow individual specialization. The final three semesters include a research project conducted under the guidance of a selected faculty mentor and culminates in the presentation and defense of a masters thesis.

The departments through which an M.S. with a concentration in molecular biology and genetics can be pursued include Biochemistry, Human Genetics, Microbiology and Immunology, and Pharmacology and Toxicology. Participating faculty are associated not only with programs and departments within the School of Medicine, but also VCU Massey Cancer Center, Philips Institute for Oral and Craniofacial Molecular Biology (School of Dentistry), Institute of Structural Biology and Drug Discovery (School of Pharmacy) and the VCU Center for the Study of Biological Complexity (VCU Life Sciences). The interdisciplinary approach to the solution of biological problems provided by this training is designed to teach students the flexibility and problem-solving skills necessary for success in a variety of scientific career opportunities or further graduate study.

### **Curriculum**

Course plan for the full-time student

	credits
<b>Fall 1</b>	
BIOC/MICR 503 Biochemistry, Cell and Molecular Biology	5
MICR 508 Introduction to Microbiology and Immunology Research	3
MICR 512 Laboratory Safety	1
MICR 690 Microbiology Research Seminar	1
Elective	3
<b>Spring 1</b>	
BIOC/MICR 504 Biochemistry, Cell and Molecular Biology	5
MICR 690 Microbiology Research Seminar	1
Directed research	3
Electives	6
<b>Summer 1</b>	
Directed research	1-6
<b>Fall 2</b>	
MICR 507 Techniques in Molecular Biology and Genetics	2
MICR 510 Scientific Integrity	1
MICR 690 Microbiology Research Seminar	1
Directed research	11
<b>Spring 2</b>	
MICR 690 Microbiology Research Seminar	1

MICR 691 Special Topics in Microbiology – MBG Journal Club (must take at least twice)	
Directed research	13

## **Neuroscience, interdisciplinary doctoral curricula with Anatomy, Biochemistry, Physiology, and Pharmacology and Toxicology**

The graduate program in neuroscience at VCU is an interdisciplinary curriculum involving the departments of Anatomy and Neurobiology, Biochemistry, Pharmacology and Toxicology, and Physiology. To obtain a sound background in neuroscience, students complete required core courses covering neuroanatomy, neurophysiology, biochemistry and molecular biology, and a series of electives. The curriculum also includes lab rotations and research seminars. Once a dissertation adviser is selected from an interdepartmental roster, the student completes his or her degree in the adviser's home department. The goal of the graduate program in neuroscience is to provide students with a core of knowledge of the basic structure and function of the central nervous system, while allowing flexibility in the choice of their advisers, electives and areas of research specialization. Written and oral comprehensive exams and the preparation of a research proposal are required to advance to candidacy. Completion of an original research dissertation is required to successfully complete the Ph.D. degree.

### **Curriculum**

Course plan for full-time student

	credits
<b>Fall 1</b>	
ANAT 690 Anatomy Research Seminar or PHTX Pharmacology Research Seminar	1
BIOC/MICR 503 Biochemistry, Cell and Molecular Biology	5
PHIS 501 Mammalian Physiology	5
PHTX 597 Introduction to Pharmacological Research	4
<b>Spring 1</b>	
ANAT 610 Neuroanatomy	5
ANAT 690 Anatomy Research Seminar or PHTX Pharmacology Research Seminar	1
BIOC/MICR 504 Biochemistry, Cell and Molecular Biology	5
PHTX 597 Introduction to Pharmacological Research	4
<b>Fall 2</b>	
ANAT 690 Anatomy Research Seminar or PHTX Pharmacology Research Seminar	1
PHTX/ANAT/PHIS/NEUS 509 Cellular and Molecular Neuroscience	4
Advanced electives	
Research credits	
<b>Spring 2</b>	
ANAT 690 Anatomy Research Seminar or PHTX Pharmacology Research Seminar	1
Advanced elective	
Research credits	
<b>Years 3 – 5</b>	
Completion of dissertation research in adviser's laboratory	

## **Pathology, Doctor of Philosophy (Ph.D.)**

## Admission requirements summary

### Pathology, Doctor of Philosophy (Ph.D.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall	Applications received prior to Jan 7 given priority consideration	GRE or MCAT

#### Special requirements:

See the [Department of Pathology Web site](#)

MCAT acceptable in lieu of GRE for combined professional/academic degree programs

The Ph.D. program in Pathology seeks to provide conceptual research training in order to prepare our students for the challenges of integrating knowledge of the molecular and cellular bases of pathology with the medical and social significance of these diseases.

Opportunities exist for graduate study in molecular and cellular aspects of carcinogenesis and experimental tumor biology within the genomics, proteomics and molecular diagnostics programs. Additional areas of study include clinical/forensic toxicology, medical informatics and clinical chemistry. In addition to rigorous training directed by internationally known research scientists, the student that earns a Ph.D. in pathology also has access to expertise and knowledge of human disease processes, which can only be gained by interacting with surgical pathologists, clinical pathologists and others engaged in the practice of this specialty.

Further information about specific aspects of our graduate program can be found on the Department of Pathology Web page at [www.pathology.vcu.edu](http://www.pathology.vcu.edu).

## Curriculum

	credits
<b>Fall 1</b>	
BIOC/MICR 503 Biochemistry, Cell and Molecular Biology	
PATH 590 Experimental Pathology Seminar	1
PHIS 501 Mammalian Physiology	5

<b>Spring 1</b>	
BIOC/MICR 504 Biochemistry, Cell and Molecular Biology	
PATH 601 General Pathology (Dentistry)	6
Start research rotations – at least two in the spring	

<b>Summer 1</b>	
Research and/or rotations	

<b>Fall 2</b>	
PATH 590 Experimental Pathology Seminar	1
STAT 503 Introduction to Stochastic Processes	3
Electives, usually related to experimental methods and/or cancer	

<b>Spring 2</b>	
PATH 590 Experimental Pathology Seminar	1
Electives, if necessary	
Begin work on proposal and committee exams	

### Summer 2

Research, completion of exams and defense of proposal; admission to candidacy. Remainder of program is committee to hypothesis-driven research.

## Pharmacology and Toxicology, Doctor of Philosophy (Ph.D.)

## Admission requirements summary

### Pharmacology and Toxicology, Doctor of Philosophy (Ph.D.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall preferred	Apr 15 Applications received prior to Jan 7 given priority consideration	GRE or MCAT

#### Special requirements:

See [Web site](#) for more information

MCAT or DAT acceptable in lieu of GRE for combined professional/academic degree programs

The Department of Pharmacology and Toxicology offers a program of graduate study leading to the Doctor of Philosophy. The broad base offered in pharmacology and toxicology, together with basic training in physiology and biochemistry, provides the background for a successful career in academic institutions, industry or government. Students customarily complete formal course work in physiology and biochemistry during the first year of study. Participation in research also is begun early in the first year. Students and faculty members join together in a seminar program, which includes distinguished visiting scientists from the U.S. and abroad. Following completion of a qualifying examination, a degree candidate is required to submit and defend a thesis embracing an original research project conducted under the guidance and supervision of an adviser. There is no foreign language requirement. The research program of the department is sufficiently broad to provide an adequate basis for entry into a wide variety of interesting areas of modern biology and medicine.

## Curriculum

A typical course plan for the full-time doctoral student is described below.

	credits
<b>Fall 1</b>	
BIOC/MICR 503 Biochemistry, Cell and Molecular Biology*	5
PHIS 501 Mammalian Physiology* or PHTX 691 Special Topics in Pharmacology	5 or 3
PHTX 597 Introduction to Pharmacological Research	6
PHTX 690 Pharmacology Research Seminar**	1

<b>Spring 1</b>	
BIOC/MICR 504 Biochemistry, Cell and Molecular Biology	5
PHTX 536 Principles of Pharmacology and Toxicology	5
PHTX 597 Introduction to Pharmacological Research	4
PHTX 690 Pharmacology Research Seminar	1

<b>Summer 1</b>	
PHTX 697 Directed Research in Pharmacology	6

**Fall 2**

PHTX 537 Principles of Pharmacology and Toxicology	5
PHTX 690 Pharmacology Research Seminar	1
PHTX 697 Directed Research in Pharmacology	3
Advanced PHTX elective	3
Advanced elective	3

**Spring 2**

PHTX 690 Pharmacology Research Seminar	1
PHTX 697 Directed Research in Pharmacology	variable
Advanced elective (if desired)	3

**Summer 2**

PHTX 697 Directed Research in Pharmacology	6
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\* Note: Students normally take the comprehensive exam in June of their second year.

In the third and subsequent years, the majority of the course load is taken as PHTX 697. Advanced electives also may be taken as desired. Students also participate in PHTX 690 seminars through their fourth years. The average time necessary to complete the doctoral program in pharmacology and toxicology is four to five years.

**General course requirements**

Students in the doctoral program in pharmacology and toxicology rarely take courses designed for students in the professional programs offered by the schools of Allied Health Professions, Medicine, Nursing and Pharmacy, and they are rarely allowed to apply PHTX courses designed for these students toward their degrees. A full-time course load is 15 credits in the fall and spring semesters and six credits in the summer. Students in the program must achieve a 3.0 or higher GPA overall in graduate courses and at least a 3.0 GPA in PHTX courses in order to graduate.

The following courses are generally taken before administration of the comprehensive examination:

BIOC/MICR 503 Biochemistry, Cell and Molecular Biology	5
BIOC/MICR 504 Biochemistry, Cell and Molecular Biology	5
PHIS 501 Mammalian Physiology or PHTX 691 Special Topics in Pharmacology	5 or 3
PHTX 536 Principles of Pharmacology and Toxicology	5
PHTX 537 Principles of Pharmacology and Toxicology	5
PHTX 597 Introduction to Pharmacological Research	variable
PHTX 690 Pharmacology Research Seminar	1
PHTX 697 Directed Research in Pharmacology	4

Two additional advanced graduate courses also must be taken prior to eligibility for the comprehensive examination. One of the courses must be chosen from the following list. The second advanced course must be taken from this list or from the additional advanced courses in the table below, as deemed appropriate by the students advisory committee.

**Advanced PHTX courses**

PHTX/ANAT/PHIS/NEUS 509 Cellular and Molecular Neuroscience	3
PHTX 614 Foundation of Psychoneuroimmunology	3
PHTX/PHIS 620 Ion Channels in Membranes	3
PHTX 625 Cell Signaling and Growth Control	3
PHTX 632 Neurochemical Pharmacology	3
PHTX 633 Behavioral Pharmacology	3
PHTX 637 Cellular Pharmacology	3
PHTX 638 Cellular Mechanisms of Toxicology	3
PHTX 644 Forensic Toxicology	3

**Advanced courses in other disciplines may include, but are not limited to:**

ANAT 610 Neuroanatomy	4
BIOC 601 Membranes and Lipids	3
BIOC 602 Physical Properties of Macromolecules	3

BIOC 605 Molecular Biology	3
EGRB 603 Biomedical Signal Processing	3
EGRB 610 Microprocessor Interfacing for Biomedical Instrumentation	3
CHEM 504 Advanced Organic Chemistry I	3
MEDC 541 Survey of Molecular Modeling Methods	3
MEDC 601 Advanced Medicinal Chemistry I	1
MEDC 630 Theoretical Methods in Drug Design	2
MICR 505 Immunobiology	3
MICR/BNFO 653 Advanced Molecular Genetics: Bioinformatics	3
PHIS 604 Cell Physiology	4
PHIS 615 Signal Detection in Sensory Systems	3
PHIS 617 Cellular Signaling	3

**Pharmacology and Toxicology, Master of Science (M.S.)****Admission requirements summary****Pharmacology and Toxicology, Master of Science (M.S.)**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.	Fall preferred	Apr 15	GRE or MCAT

**Special requirements:**

See [Web site](#) for more information

MCAT or DAT acceptable in lieu of GRE for combined professional/academic degree programs

The Department of Pharmacology and Toxicology offers a graduate program leading to the Master of Science degree. This is a research-oriented degree program comprised of graduate course work and supervised research leading to a master's thesis. The M.S. program will be of interest to individuals planning on technical positions in pharmacology or toxicology research or testing; students interested in the health professions, such as medicine or dentistry, who desire additional research training; and for those interested in a government position, such as those offered with regulatory agencies, who seek training in pharmacology and toxicology.

**Curriculum**

A typical course plan for the full-time master's student is described below.

	credits
<b>Fall 1</b>	
BIOC/MICR 503 Biochemistry, Cell and Molecular Biology*	5
PHIS 501 Mammalian Physiology* or PHTX 691 Special Topics in Pharmacology	5 or 3
PHTX 690 Pharmacology Research Seminar**	1
PHTX 697 Directed Research in Pharmacology	6
<b>Spring 1</b>	
BIOC/MICR 504 Biochemistry, Cell and Molecular Biology	5
PHTX 536 Principles of Pharmacology and Toxicology	5
PHTX 690 Pharmacology Research Seminar	1
PHTX 697 Directed Research in Pharmacology	4
<b>Summer 1</b>	
PHTX 697 Directed Research in Pharmacology	6
<b>Fall 2</b>	



PHTX 537 Principles of Pharmacology and Toxicology	5
PHTX 690 Pharmacology Research Seminar	1
PHTX 697 Directed Research in Pharmacology	3
Advanced PHTX elective	3
Advanced elective	3

**Spring 2**

PHTX 690 Pharmacology Research Seminar	1
PHTX 697 Directed Research in Pharmacology	variable
Advanced elective (if desired)	3

**Summer 2**

PHTX 697 Directed Research in Pharmacology	6
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\* These are typical requirements. Less advanced courses may be substituted depending on situation.

\*\* M.S. students are required to give a seminar. A student must take an advanced graduate course in their specialty.

**Advanced PHTX courses**

PHTX/ANAT/PHIS/NEUS 509 Cellular and Molecular Neuroscience	3
PHTX/PHIS 620 Ion Channels in Membranes	3
PHTX 625 Cell Signaling and Growth Control	3
PHTX 632 Neurochemical Pharmacology	3
PHTX 633 Behavioral Pharmacology	3
PHTX 637 Cellular Pharmacology	3
PHTX 638 Cellular Mechanisms of Toxicology	3
PHTX 644 Forensic Toxicology	3

**Advanced courses in other disciplines may include, but are not limited to:**

ANAT 610 Neuroanatomy	4
BIOC 601 Membranes and Lipids	3
BIOC 602 Physical Properties of Macromolecules	3
BIOC 605 Molecular Biology	3
EGRB 603 Biomedical Signal Processing	3
EGRB 610 Microprocessor Interfacing for Biomedical Instrumentation	3
CHEM 504 Advanced Organic Chemistry I	3
MEDC 541 Survey of Molecular Modeling Methods	3
MEDC 601 Advanced Medicinal Chemistry I	1
MEDC 630 Theoretical Methods in Drug Design	2
MICR 505 Immunobiology	3
MICR/BNFO 653 Advanced Molecular Genetics: Bioinformatics	3
PHIS 604 Cell Physiology	4
PHIS 615 Signal Detection in Sensory Systems	3
PHIS 617 Cellular Signaling	3

**Physiology, Doctor of Philosophy (Ph.D.)****Admission requirements summary****Physiology, Doctor of Philosophy (Ph.D.)**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall preferred	Applications received prior to Jan 7 given priority consideration	GRE, MCAT or DAT

**Special requirements:**

MCAT or DAT acceptable in lieu of GRE for combined professional/academic degree programs

Graduate study in the Department of Physiology of the School of Medicine is a highly individualized undertaking, of which required course work is only

one component. Each student's program is tailored to meet his or her particular interests, with the primary emphasis on developing research skills and the capacity for scholarship.

Opportunities for research experience begin in the first year, when students spend time working in several faculty laboratories of their choice. These lab rotations enable students to examine current faculty research projects and choose their areas of specialization. In the second and subsequent years, increasingly more time is devoted to independent research under the guidance of a faculty adviser. Department-sponsored seminars give students opportunities to discuss their research interests with visiting scientists, and many students present their work at national professional meetings.

The Ph.D. program in physiology normally takes at least four years to complete. The first two years are devoted mainly to course work: the first year consists of required courses, while the second is geared toward electives and research. On satisfactory completion of two years of course work, students must pass written and oral comprehensive examinations to qualify for degree candidacy. Following admission to candidacy, each student must conduct a substantial original research project, prepare a written dissertation and defend it successfully in an oral examination.

**Curriculum**

Typical course plan for the full-time student

	credits
<b>Fall 1</b>	
BIOC/MICR 503 Biochemistry, Cell and Molecular Biology	5
PHIS 501 Mammalian Physiology	5
PHIS 690 Physiology Research Seminar	1
Elective – suggestions include: ANAT 611 Histology (6) or BIOS 543 Biostatistics (3)	variable
<b>Spring 1</b>	
BIOC/MICR 504 Biochemistry, Cell and Molecular Biology	5
PHIS 604 Cell Physiology	4
PHIS 690 Physiology Research Seminar	1
Elective – suggestions include: ANAT 610 Neuroanatomy (6) or PHTX 536 Pharmacology (5)	variable
<b>Fall 2</b>	
MICR 510 Scientific Integrity	1
PHIS 690 Physiology Research Seminar	1
PHIS 691 Student Seminar	1
PHIS 697 Assigned Research	variable
One advanced PHIS course	variable
<b>Spring 2</b>	
PHIS 690 Physiology Research Seminar	1
PHIS 691 Student Seminar	1
PHIS 697 Assigned Research	variable
One advanced PHIS course	variable

The student would be expected to stand for his qualifying exam at the completion of the second year.

**Years 3 and 4**

PHIS 690 Physiology Research Seminar	1
PHIS 697 Directed Research	variable

For additional information see the departmental Web site at [www.vcu.edu/physio](http://www.vcu.edu/physio).

## Physical Therapy Track in Physiology Ph.D. program

### Admission requirements summary

#### Physical Therapy Track in Physiology Ph.D. program

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall	Applications received prior to Jan 7 given priority consideration	B.S., M.S. or D.P.T. in Physical Therapy Contact Physical Therapy or Anatomy for specific admission requirements

The departments of Anatomy and Neurobiology and Physiology of the School of Medicine, together with the Department of Physical Therapy of the School of Allied Health Professions offers Ph.D. programs in anatomy-physical therapy and physiology-physical therapy. The goals of the doctoral programs are to train students in research and educational skills in preparation for students to function as physical therapy faculty members. Application is made to either the Department of Anatomy and Neurobiology or the Department of Physiology. Acceptance into either of the programs requires approval by the admission committees of the cooperating departments. **Graduates receive either the Ph.D. in Anatomy or the Ph.D. in Physiology.**

Students in the Anatomy/Physical Therapy Doctoral Program take required courses within the departments of Anatomy and Neurobiology and Physical Therapy. Students in the Physiology/Physical Therapy Program take required courses within the departments of Physiology and Physical Therapy. (Other courses may be required by the students dissertation committee.) In both programs, the student plans and conducts a research study generally under the direction of a faculty member of the Department of Physical Therapy; however, the dissertation adviser may be from either of the two primary departments. In addition, the student is required to assist in teaching three courses.

In addition to the requirements listed above, admission to either the anatomy/physical therapy or physiology/physical therapy programs requires:

- a minimum of a bachelor's degree,
- graduation from an accredited program in physical therapy (or equivalent, if trained outside the United States) and
- demonstrated clinical experience in physical therapy.

Applicants to the physiology/physical therapy program also are encouraged to have completed at least one course in organic chemistry. Applicants should refer to the departmental Web site for more information or contact:

Dr. Sheryl Finucane, Director of Graduate Studies  
Department of Physical Therapy  
School of Allied Health Professions  
Virginia Commonwealth University  
P.O. Box 980224  
Richmond, VA 23298-0224  
Phone: (804) 828-0234

For additional information about the collaborating departments, refer to their Web sites:

- Department of Physical Therapy
- Department of Anatomy and Neurobiology

- Department of Physiology

## Physiology, Master of Science (M.S.)

### Admission requirements summary

#### Physiology, Master of Science (M.S.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.	Fall preferred	Applications received prior to Jan 7 given priority consideration	GRE, MCAT or DAT

#### Special requirements:

MCAT or DAT acceptable in lieu of GRE for combined professional/academic degree programs

The department offers courses of study leading to two graduate degrees in physiology, the Master of Science (M.S.) and the Doctor of Philosophy (Ph.D.). A combined M.D./Ph.D. degree program also is available through this department and the School of Medicine. It is generally recommended that students intending to pursue careers as professional physiologists should attempt to earn the Ph.D. Work done in partial or complete fulfillment of the requirements for the master's degree may be applied toward the Ph.D. provided that it is of adequate quality.

Graduate education in physiology is a highly individualized enterprise, of which the formal course requirements comprise only a portion. The degree program described here provides an opportunity for apprenticeship in research and, through this, the development of a capacity for scholarship. The essence of this type of education lies in the development of a close relationship between the student and the faculty adviser. The adviser and the student, jointly and with the approval of the department chair and the associate dean of medicine for graduate education, select the student's graduate advisory committee.

The Master of Science includes a year of course work and a second year largely devoted to completion of an independent research project, writing a thesis based on this work and a successful oral defense of this thesis.

### Curriculum

Typical course plan for the full-time student

	credits
<b>Fall 1</b>	
BIOC/MICR 503 Biochemistry, Cell and Molecular Biology	5
PHIS 501 Mammalian Physiology	5
PHIS 690 Physiology Research Seminar	1
Elective – suggestions include:	variable
ANAT 611 Histology (5)	
BIOS/STAT 543 Biostatistics (3)	
MICR 505 Immunobiology (3)	
PHTX 548 Drug Dependence (3)	
<b>Spring 1</b>	
BIOC/MICR 504 Biochemistry, Cell and Molecular Biology	5
PHIS 604 Cell Physiology	4
PHIS 690 Physiology Research Seminar	1

Elective – suggestions include: variable  
 ANAT 610 Neuroanatomy (5)  
 PHIS 512 Cardiovascular and Exercise Physiology (3)  
 PHIS 691 Special Topics: Cardiac Auscultation and Hemodynamics (2)  
 PHTX 535 Introduction to Toxicology (4)  
 PHTX 536 Principles of Pharmacology and Toxicology (5)  
 PHTX 691 Special Topics in Pharmacology: Neuroimmunology (3)  
 PHTX 691 Special Topics in Pharmacology: Psychobioneuroimmunology (3)

#### Fall 2

MICR 510 Scientific Integrity 1  
 PHIS 690 Physiology Research Seminar 1  
 PHIS 691 Special Topics: Student Seminar 1  
 PHIS 697 Directed Research in Physiology variable  
 One advanced PHIS course variable

#### Spring 2

PHIS 690 Physiology Research Seminar 1  
 PHIS 691 Special Topics: Student Seminar 1  
 PHIS 697 Directed Research in Physiology variable

For additional information see the departmental Web site at [www.vcu.edu/physio](http://www.vcu.edu/physio).

## Pre-medical Basic Health Science, Certificate in (Post-baccalaureate graduate certificate)

### Admission requirements summary

#### Pre-medical Basic Health Science, Certificate in (Post-baccalaureate graduate certificate)

Indicate specialization:  
 Anatomy, Biochemistry, Genetics, Microbiology, Pharmacology or Physiology

The Pre-medical Basic Health Sciences Certificate program of the VCU School of Medicine offers the opportunity for advanced graduate-level training for individuals seeking to enhance their background in the basic health sciences prior to entry into professional school. The program offers defined curricula in six areas: [anatomy](#), [biochemistry](#), [human genetics](#), [microbiology](#), [pharmacology](#) and [physiology](#). The curricula define an intensive program of study intended for completion in two successive academic semesters. Applicants to the program designate a preferred area of specialization with admission determined by the department. Admission to the program is competitive. As a guide, applicants should anticipate meeting the minimum expectations of performance and achievement described. Specialization areas may require additional prerequisites beyond those listed. Individual departments should be contacted for detailed information.

### Admission requirements

Applicants should have successfully completed undergraduate training and hold a baccalaureate degree. Training in chemistry through completion of course work in organic chemistry is required. Admissions to the program are generally drawn from applicants with an undergraduate grade point average above 2.80 (on a 4.0 scale or equivalent), a performance on the Graduate Record Examination above a combined score of 1100 (V+Q), and a performance above a score of 3.5 on the analytical section or a quantitative score on the MCAT examination greater than 22. Applicants holding an undergraduate degree from recognized foreign institutions must display an acceptable level of English proficiency by achieving a score of 250 on the computer-based TOEFL examination or 600 on the written

version. Applicants may seek admission to no more than two curricula in an application and should indicate a preference if two curricula are indicated.

#### To apply

Applicants to the program must complete forms provided by the Graduate School indicating "Pre-medical BHS Certificate" as the curriculum and designating a preferred specialization from the six offered. Detailed information on the curricula is available from the individual departments at:

Virginia Commonwealth University  
 School of Medicine  
 Richmond, Virginia 23298

### Degree requirements

Students must complete a minimum of 27 credit hours of course work with a cumulative grade point average of 3.0 (on a 4.0 scale) or better. Courses must be drawn from the listing of required and elective courses identified at the department level for each of the specializations. The curriculum should be completed in successive full academic terms (typically the fall and spring semester). Completion of the program does not afford a guarantee of admission to professional training programs at VCU. On completion of the program, individuals may elect to seek admission to advanced degree (M.S., Ph.D.) programs. The curricula have been developed so as to satisfy didactic requirements of these programs. Individuals interested in exploring the requirements for admission to advanced degree training should consult with the program directors listed in this bulletin.

## Anatomy, Certificate in (Post-baccalaureate Pre-medical Basic Health Science graduate certificate)

### Admission requirements summary

#### Anatomy, Certificate in (Post-baccalaureate Pre-medical Basic Health Science graduate certificate)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Certificate	Fall	No deadline. Generally applications accepted through June admission the following fall. Priority given to early applicants.	GRE, MCAT or DAT

#### Special requirements:

MCAT or DAT acceptable in lieu of GRE for combined professional/academic degree programs

### Curriculum

	credits
<b>Fall – required courses</b>	
ANAT 611 Histology	5
ANAT 690 Anatomy Research Seminar	1
BIOC/MICR 503 Biochemistry, Cell and Molecular Biology	5
<b>Example electives</b>	
ANAT/PHTX/PHIS/NEUS 509 Cellular and Molecular Neuroscience	4
MICR 505 Immunobiology	3
PHIS 501 Mammalian Physiology	5

#### Spring – required courses

ANAT 610 Neuroanatomy	5
ANAT 690 Anatomy Research Seminar	1
BIOC/MICR 504 Biochemistry, Cell and Molecular Biology	5

**Example electives**

PHIS 512 Cardiovascular and Exercise Physiology	3
PHIS 604 Cell Physiology	4

### Biochemistry, Certificate in (Post-baccalaureate Pre-medical Basic Health Science graduate certificate)

**Admission requirements summary****Biochemistry, Certificate in (Post-baccalaureate Pre-medical Basic Health Science graduate certificate)**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Certificate	Fall	No deadline. Generally applications accepted through June admission the following fall. Priority given to early applicants.	GRE, MCAT or DAT

**Special requirements:**

MCAT or DAT acceptable in lieu of GRE for combined professional/academic degree programs

**Curriculum**

credits

**Fall – required courses**

BIOC/MICR 503 Biochemistry, Cell and Molecular Biology	5
BIOS/STAT 543 Statistical Methods I	3
PHIS 501 Mammalian Physiology	5

**Example electives**

ANAT/PHTX/PHIS/NEUS 509 Cellular and Molecular Neuroscience	4
BIOC 690 Biochemistry Seminar	1
MICR 505 Immunobiology	3

**Spring – required courses**

BIOC/MICR 504 Biochemistry, Cell and Molecular Biology	5
PHIS 604 Cell Physiology	4

**Example electives**

ANAT 610 Neuroanatomy	5
BIOC 690 Biochemistry Seminar	1
BIOC 691 Special Topics in Biochemistry	4
PHIS 512 Cardiovascular and Exercise Physiology	3
PHTX 535 Introduction to Toxicology	4
PHTX 536 Principles of Pharmacology and Toxicology	5

### Genetics, Certificate in (Post-baccalaureate Pre-medical Basic Health Science graduate certificate)

**Admission requirements summary****Genetics, Certificate in (Post-baccalaureate Pre-medical Basic Health Science graduate certificate)**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Certificate	Fall	No deadline. Generally applications accepted through June admission the following fall. Priority given to early applicants.	GRE, MCAT or DAT

**Special requirements:**

MCAT or DAT acceptable in lieu of GRE for combined professional/academic degree programs

**Curriculum**

credits

**Fall – required courses**

BIOC/MICR 503 Biochemistry, Cell and Molecular Biology	5
BIOS/STAT 543 Statistical Methods I	3
HGEN/BIOL 501 Human Genetics	3
HGEN 502 Advanced Human Genetics	2
HGEN 511 Human Cytogenetics	3

or

HGEN 614 Human Biochemical and Molecular Genetics	
HGEN 690 Genetics Research Seminar	1

**Example electives**

HGEN 691 Special Topics in Genetics – Classic Papers	1
HGEN 691 Special Topics in Genetics – Bayesian Analysis	1

**Spring – required courses**

BIOC/MICR 504 Biochemistry, Cell and Molecular Biology	5
HGEN 502 Advanced Human Genetics	2
HGEN 603 Mathematical and Statistical Genetics	3
HGEN 690 Genetics Research Seminar	1
HGEN 691 Special Topics in Genetics – Introduction to Clinical Genetics	1

**Example electives**

HGEN/BIOL 516 Population Genetics	3
HGEN 600 Clinical Genetics	3
HGEN 617 Genetic Analysis and Complex Traits	3
HGEN 619 Quantitative Genetics	3
HGEN 620 Principles of Human Behavioral Genetics	3

### Microbiology, Certificate in (Post-baccalaureate Pre-medical Basic Health Science graduate certificate)

**Admission requirements summary****Microbiology, Certificate in (Post-baccalaureate Pre-medical Basic Health Science graduate certificate)**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Certificate	Fall	No deadline. Generally applications accepted through June admission the following fall. Priority given to early applicants.	GRE, MCAT or DAT

**Special requirements:**

MCAT or DAT acceptable in lieu of GRE for combined professional/academic degree programs

**Curriculum**

credits

**Fall – required courses**

BIOC/MICR 503 Biochemistry, Cell and Molecular Biology	5
MICR 505 Immunology	3
MICR 515 Principles of Molecular Microbiology	3

**Example electives**

HGEN 501/BIOL 530 Human Genetics	3
MICR 507 Techniques in Molecular Biology and Genetics	2
PHIS 501 Mammalian Physiology	5
PHTX/ANAT/PHIS/NEUS 509 Cellular and Molecular Neuroscience	4

**Spring – required courses**

BIOC/MICR 504 Biochemistry, Cell and Molecular Biology	5
MICR 516 Mechanisms of Viral and Parasite Pathogenesis	3
or	
MICR 518 Molecular Mechanisms of Bacterial Pathogenesis	

**Example electives**

PHIS 604 Cell Physiology	4
PHTX 536 Principles of Pharmacology and Toxicology	5

### Pharmacology, Certificate in (Post-baccalaureate Pre-medical Basic Health Science graduate certificate)

**Admission requirements summary****Pharmacology, Certificate in (Post-baccalaureate Pre-medical Basic Health Science graduate certificate)**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Certificate	Fall	No deadline. Generally applications accepted through June admission the following fall. Priority given to early applicants.	GRE, MCAT or DAT

**Special requirements:**

MCAT or DAT acceptable in lieu of GRE for combined professional/academic degree programs

**Curriculum**

credits

**Fall – required courses**

BIOC/MICR 503 Biochemistry, Cell and Molecular Biology	5
PHIS 501 Mammalian Physiology	5
PHTX 597 Introduction to Pharmacological Research	4
PHTX 690 Pharmacology Research Seminar	1

**Example electives**

PHTX 548 Drug Dependence	3
or	
PHTX 597 Introduction to Pharmacological Research	
or	
alternate elective	

**Spring – required courses**

BIOC/MICR 504 Biochemistry, Cell and Molecular Biology	5
PHTX 536 Principles of Pharmacology and Toxicology	5
PHTX 690 Pharmacology Research Seminar	1

**Example electives**

PHTX 535 Introduction to Toxicology	4
or	
PHTX 597 Introduction to Pharmacological Research	
or	
alternate elective	

### Physiology, Certificate in (Post-baccalaureate Pre-medical Basic Health Science graduate certificate)

**Admission requirements summary****Physiology, Certificate in (Post-baccalaureate Pre-medical Basic Health Science graduate certificate)**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Certificate	Fall	No deadline. Generally applications accepted through June admission the following fall. Priority given to early applicants.	GRE, MCAT or DAT

**Special requirements:**

MCAT or DAT acceptable in lieu of GRE for combined professional/academic degree programs

**Curriculum**

credits

**Fall – required courses**

BIOC/MICR 503 Biochemistry, Cell and Molecular Biology	5
PHIS 501 Mammalian Physiology	5
PHIS 690 Physiology Research Seminar	1

**Example electives**

ANAT 611 Histology	5
BIOS/STAT 543 Statistical Methods I	3
MICR 505 Immunobiology	3
PHTX 535 Introduction to Toxicology	4
PHTX 548 Drug Dependence	3

**Spring – required courses**

BIOC/MICR 504 Biochemistry, Cell and Molecular Biology	5
PHIS 604 Cell Physiology	4
PHIS 690 Physiology Research Seminar	1

**Example electives**

ANAT 610 Neuroanatomy	5
EPID 603 Public Health Policy and Politics	3
PHIS 512 Cardiovascular and Exercise Physiology	3
PHTX 536 Principles of Pharmacology and Toxicology	5

### Public Health, Master of (M.P.H.)

**Admission requirements summary****Public Health, Master of (M.P.H.)**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.P.H.	Fall	Priority given to applications received by Apr 1	GRE
		Applications reviewed on a rolling basis until class is filled	

**Special requirements:**

Students applying to joint M.D./M.P.H. program should be accepted to the VCU School of Medicine prior to applying to the M.D./M.P.H. program

MCAT or DAT acceptable in lieu of GRE for combined professional/academic degree programs

The Master of Public Health program is a four-semester course of study that leads to a Master of Public Health (M.P.H.) degree. The first M.P.H. program in Virginia, it is fully accredited by the Council for Education in Public Health.

The program is closely linked with local, state and national public health agencies, organizations and professionals in order to enhance the student's appreciation and understanding of the application of public health principles to practice. Under the guidance of a faculty adviser, each student must conduct a scientific investigation on a topic relevant to public health and prepare and report the results of this research. The program provides students with the skills for employment in a broad range of positions in local, state and national public health agencies.

There are four tracks within the M.P.H. program: addiction studies, environmental health, epidemiology and a generalist track.

### Addiction studies track

## Admission requirements summary

### Addiction studies track

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
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M.P.H.	Fall	Priority given to applications received by Apr 1	GRE
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Applications reviewed  
on a rolling basis until  
class is filled

#### Special requirements:

Students applying to joint M.D./M.P.H. program should be accepted to the VCU School of Medicine prior to applying to the M.D./M.P.H. program

MCAT or DAT acceptable in lieu of GRE for combined professional/academic degree programs

This track is designed for persons interested in learning more about the impact of addiction on the health of populations. Study in this track focuses on addiction issues and how data are used to develop policy and prevention planning.

## Curriculum

### Fall 1

BIOS/STAT 543 Statistical Methods I (3)  
EPID 571 Epidemiology I: Principles of Epidemiology (3)  
EPID 600 Introduction to Public Health (3)  
EPID 602 Public Health Organization and Management (3)  
PHTX 548 Drug Dependence (3)

credits  
15

### Spring 1

EPID 533 Contemporary Issues in Addiction Prevention and Treatment (3)  
EPID 605 Epidemiology and Health Behaviors (3)  
EPID 608 Politics and Policy Planning for Addiction (3)  
NURS 509 Advanced Nursing Practice: Community (3)  
Elective (3)

15

### Summer

EPID 692 Public Health Internship (3)  
Electives (6)

9

### Fall 2

EPID 604 Principles of Occupational and Environmental Health II (3)  
EPID 691 Program Research Project (3)

6

#### Special requirements:

Students applying to joint M.D./M.P.H. program should be accepted to the VCU School of Medicine prior to applying to the M.D./M.P.H. program

MCAT or DAT acceptable in lieu of GRE for combined professional/academic degree programs

This track provides expertise in the impact of the environment on the health of populations and training in methods designed to evaluate health risk presented by the environment.

The M.P.H. specializing in environmental health requires a minimum of 45 credits.

The research project is an epidemiologic scientific investigation focusing on a topic relevant to environmental health in human populations, conducted under the guidance of a faculty adviser and/or preceptor. The student is required to prepare a report of research results. Upon approval of the research document by the adviser and preceptor, the student will give a final oral presentation to the department. The student's adviser will submit a final grade to the department.

## Curriculum

### Fall 1

BIOS/STAT 543 Statistical Methods I (3)  
EPID 571 Epidemiology I: Principles of Epidemiology (3)  
EPID 600 Introduction to Public Health (3)  
EPID 602 Public Health Organization and Management (3)  
Elective (3)

credits  
15

### Spring 1

EPID 511 Industrial Hygiene: Hazard Identification and Evaluation or  
EPID 512 Industrial Hygiene: Methods of Hazard Control (3)  
EPID 541 Principles of Waste Management (3)  
EPID 605 Epidemiology and Health Behaviors (3)  
PHTX 535 Introduction to Toxicology (4)  
Elective (3)

16

### Summer

EPID 692 Public Health Internship (3)  
Electives (6)

9

### Fall 2

EPID 604 Principles of Occupational and Environmental Health II (3)  
EPID 691 Program Research Project (3)

6

## Epidemiology track

## Admission requirements summary

### Epidemiology track

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
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M.P.H.	Fall	Priority given to applications received by Apr 1	GRE
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Applications reviewed  
on a rolling basis until  
class is filled

#### Special requirements:

Students applying to joint M.D./M.P.H. program should be accepted to the VCU School of Medicine prior to applying to the M.D./M.P.H. program  
MCAT or DAT acceptable in lieu of GRE for combined professional/academic degree programs

## Environmental health track

## Admission requirements summary

### Environmental health track

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
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M.P.H.	Fall	Priority given to applications received by Apr 1	GRE
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Applications reviewed  
on a rolling basis until  
class is filled

This track is designed to train students who want to specialize in research methods, and analysis and interpretation of public health data.

The M.P.H. specializing in epidemiology requires a minimum of 45 credits.

Under the guidance of a faculty adviser and/or preceptor, each student must conduct an epidemiologic scientific investigation on a topic relevant to human and public health. The student must prepare a report of the results of this research. Upon approval of the research document by the adviser and preceptor, the student will give a final oral presentation to the department. The student's adviser will submit a final grade to the department.

## Curriculum

	credits
<b>Fall 1</b>	15
BIOS/STAT 543 Statistical Methods I (3)	
EPID 571 Epidemiology I: Principles of Epidemiology (3)	
EPID 600 Introduction to Public Health (3)	
EPID 602 Public Health Organization and Management (3)	
Elective (3)	
<b>Spring 1</b>	15
BIOS/STAT 544 Statistical Methods II (3)	
EPID 603 Public Health Policy and Politics (3)	
EPID 605 Epidemiology and Health Behaviors (3)	
EPID 606 Epidemiology II: Epidemiologic Methods (3)	
Elective (3)	
<b>Summer</b>	9
EPID 692 Public Health Internship (3)	
Electives (6)	
<b>Fall 2</b>	6
EPID 604 Principles of Occupational and Environmental Health II (3)	
EPID 691 Program Research Project (3)	

## Generalist track

### Admission requirements summary

#### Generalist track

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.P.H.	Fall	Priority given to applications received by Apr 1	GRE
		Applications reviewed on a rolling basis until class is filled	

#### Special requirements:

Students applying to joint M.D./M.P.H. program should be accepted to the VCU School of Medicine prior to applying to the M.D./M.P.H. program

MCAT or DAT acceptable in lieu of GRE for combined professional/academic degree programs

This track gives students a broad overview of public health issues and training in epidemiologic and biostatistical methods commonly used by public health professionals. Students in this track also can design a curriculum in a focused area of interest for which there is no track currently available.

## Curriculum

	credits
<b>Fall 1</b>	15
BIOS/STAT 543 Statistical Methods I (3)	
EPID 571 Epidemiology I: Principles of Epidemiology (3)	
EPID 600 Introduction to Public Health (3)	
EPID 602 Public Health Organization and Management (3)	
Elective (3)	
<b>Spring 1</b>	15
EPID 603 Public Health Policy and Politics (3)	
EPID 605 Epidemiology and Health Behaviors (3)	
EPID 606 Epidemiology II: Epidemiologic Methods (3)	
NURS 509 Advanced Nursing Practice: Community	
Elective (3)	
<b>Summer</b>	9
EPID 692 Public Health Internship (3)	
Electives (6)	
<b>Fall 2</b>	6
EPID 604 Principles of Occupational and Environmental Health II (3)	
EPID 691 Program Research Project (3)	

## Combined Doctor of Medicine (M.D.) and Master of Public Health (M.P.H.)

The Department of Epidemiology and Community Health in the School of Medicine offers a program for VCU medical students to obtain a Master of Public Health degree in conjunction with their medical training. The M.D./M.P.H. dual-degree program provides an opportunity for medical students who wish to pursue a public health or research career to graduate from medical school trained in both clinical and preventive, population-oriented medicine.

The objective of the dual-degree M.D./M.P.H. program is to provide high quality and in-depth training in public health to qualified medical students. The five-year program includes four years of medical school and one year of study in the M.P.H. program. During the M.P.H. year students take a minimum of 30 credits of didactic courses. To complete the M.P.H. requirements, students receive 12 credits for successful academic work during the first two years of medical school and take a minimum of one public health elective during the fourth year. Students may register for the M.P.H. year either prior to entering medical school or after the M-III year and prior to M-IV electives. Enrollment in the dual-degree program requires admission into both the School of Medicine and the Graduate School. Students must successfully complete all required course work to receive both degrees at the completion of the five years.

## Curriculum

Typical course plan for M.P.H. year:

	credits
<b>Fall</b>	15
BIOS/STAT 543 Statistical Methods I (3)	
EPID 571 Epidemiology I: Principles of Epidemiology (3)	
EPID 600 Introduction to Public Health (3)	
EPID 602 Public Health Organization and Management (3)	
EPID 604 Principles of Occupational and Environmental Health II (3)	
<b>Spring</b>	12
BIOS/STAT 544 Statistical Methods II (if epidemiology track) (3)	
EPID 603 Public Health Policy and Politics (3)	
EPID 606 Epidemiology II: Epidemiological Methods (3)	
EPID 693 Special Topics Research (3)	
<b>Summer</b>	3
EPID 693 Special Topics Research (3)	

## Combined Doctor of Pharmacy (Pharm.D.) and Master of Public Health (M.P.H.)

The School of Pharmacy and the Department of Epidemiology and Community Health in the School of Medicine offer a dual degree program that results in a Pharm.D. and M.P.H. This dual degree program offers students the opportunity to achieve a doctorate in pharmacy while also learning about research and the importance of population health. This five-year program requires students to spend their fourth year pursuing the M.P.H. degree and transition back to pharmacy for advanced practice experiences. The students will be required to take 36 of the 45 credits required for the M.P.H. The field study requirement will be satisfied by Pharm.D. special advanced practice experiences in community health during the fifth year of the program.

### Curriculum

	credit
<b>P1 fall semester</b>	
ANAT 505 Anatomy	3
BIOC 523 Biochemistry I	3
MEDC 501 Medicinal Chemistry I	2
PCEU 503 Principles of Pharmacy	3
PCEU 517 Pharmacy Skills Laboratory I	1
PHAR 521 Pharmacy and Health Care Systems	2
PHAR 525 Pharmacy Communications	2
PHAR 556 Introduction to Pharmacy Practice	1
	17
<b>P1 spring semester</b>	
BIOC 524 Biochemistry II	2
PHIS 506 Physiology and Pathophysiology	5
MICR 501 Microbiology	4
PCEU 504 Biopharmaceutics and Dosage Forms	2.5
PCEU 506 Biopharmaceutics and Pharmacokinetics	2
PCEU 518 Pharmacy Skills Laboratory II	1
PHAR 558 Pharmacy Practicum II	0.5
	17
<b>P2 fall semester</b>	
MEDC 602 Principles of Pharmaceutical Analysis	2.0
MEDC 603 Medicinal Chemistry II	2.5
PCEU 617 Pharmacy Skills Laboratory III	1.0
PHAR 627 Principles of Pharmacy Practice Management	4.5
PHAR 643 Pharmacotherapy I	3.5
PHAR 657 Pharmacy Practicum III	0.5
PHTX 603 Pharmacology I	3.0
	17.0
<b>P2 spring semester</b>	
MEDC 604 Medicinal Chemistry III	2.5
PCEU 606 Applied Pharmacokinetics	2.5
PHAR 644 Pharmacotherapy II	4.5
PHAR 658 Pharmacy Practicum IV	0.5
PHTX 604 Pharmacology II	4
Elective(s)	2-3
	16-17
<b>P3 fall semester</b>	
EPID 600 Introduction to Public Health	3
PHAR 701 Ethics in Pharmacy Practice	2
PHAR 743 Pharmacotherapy III	3
PHAR 745 Drug Literature Evaluation	4
PHAR 747 Physical Assessment	1
PHAR 757 Pharmacy Practicum V	.5
Pharmacy elective(s)	2-3
	15.5-16.5

### P3 spring semester

EPID 603 Health Politics and Policy	3
PHAR 718 Pharmacy Skills Laboratory IV	1
PHAR 724 Pharmacy Law	3
PHAR 744 Integrated Therapeutics	3
PHAR 748 Self-Medication Awareness and Community Health	3
PHAR 758 Pharmacy Practicum VI	.5
Elective(s)	2-3
	15.5-16.5

### P4 fall semester

BIOS 543 Statistical Methods I	3
EPID 571 Principles of Epidemiology	3
EPID 602 Public Health Systems Organization	3
EPID 604 Occupational and Environmental Health	3
EPID 693 Fundamentals of Public Health Data Management	3
	15

### P4 spring semester

EPID 605 Health Behavior	3
EPID 606 Epidemiology Methods II	3
EPID 691 Research Project	3
Epidemiology elective	3
	12

### P5 year

PHAR 760 Acute Care Pharmacy Practice	5
PHAR 761 Institutional Practice Rotation	5
PHAR 762 Geriatrics Practice Rotation	5
PHAR 763 Ambulatory Care Rotation	5
PHAR 764 Community Practice Rotation	5
PHAR 765 Elective I (in public health)	5
PHAR 766 Elective II (in public health)	5
PHAR 767 Elective III	5
PHAR 768 Advanced Community Pharmacy Practice	5
Total	42-45

## Combined Master of Science in Nursing (M.S.) and Master of Public Health (M.P.H.)

### Admission requirements summary

#### Public Health, Master of (M.P.H.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.P.H.	Fall	Priority given to applications received by Apr 1	GRE
		Applications reviewed on a rolling basis until class is filled	

#### Special requirements:

Students applying to joint M.D./M.P.H. program should be accepted to the VCU School of Medicine prior to applying to the M.D./M.P.H. program

MCAT or DAT acceptable in lieu of GRE for combined professional/academic degree programs



**Nursing, Master of Science (M.S.)**

Indicate specialization: Adult Health (Indicate Acute or Primary NP or CNS as track), Child Health, Family Health, Nursing Administration and Leadership, Integrative Psychiatric Mental Health Nursing or Women's Health

List as track: Traditional M.S. (for R.N. with B.S. in Nursing); Non B.S.N.-M.S. program (for R.N. with B.S./B.A. in another discipline); or R.N.-M.S. (for R.N. with Associate's or Diploma in Nursing)

**Entry-level program for the qualified non-R.N. student who has earned a bachelor's degree in another discipline**

Indicate specialization: Adult Health (indicate Acute or Primary as track), Child Health, Family Health, Nurse Executive, Psychiatric Mental Health, Women's Health; list Accelerated Second Degree as track

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.	Fall only	Applications received by Feb 1 given priority consideration	GRE
Entry-level program	Summer only	Applications received by Dec 1 given priority consideration	

The School of Nursing and the School of Medicine's Department of Epidemiology and Community Health offer a dual-degree program with a focus in community health nursing and public health that leads to two degrees: Master of Public Health and Master of Science in Nursing. The five-semester program meets the accreditation requirements of both disciplines and is tailored to meet the needs of students who want to have a public health degree in conjunction with a clinical degree. The program is designed to prepare students with the skills, knowledge and competencies necessary to conduct needs assessments of populations; perform program planning and evaluation; understand the effects of contemporary issues and health policies on the public's health; and provide care and services to prevent disease and promote and preserve the health of populations. Students may enroll for part-time study.

Applicants must successfully meet the admissions requirements of both the M.P.H. program and the M.S. in Nursing program. Applications should be sent to the Graduate School. Applications will then be reviewed in the School of Nursing by a joint review committee comprised of faculty from both schools. Advisers will be assigned from the School of Nursing.

**Curriculum**

Typical course plan for dual-degree program:

	credits
<b>Fall 1</b>	13
BIOS/STAT 543 Statistical Methods I (3)	
EPID 571 Epidemiology I: Principles of Epidemiology (3)	
EPID 600 Introduction to Public Health (3)	
NURS 501 Advanced Professionalization I (1)	
NURS 512 Advanced Nursing Science (3)	
<b>Spring 1</b>	12
EPID 605 Epidemiology of Health Behaviors (3)	
EPID 606 Epidemiology II: Epidemiologic Methods (3)	
NURS 508 Advanced Nursing Practice: Systems (3)	
NURS 689 Integrative Systems Community Practicum (3)	
<b>Summer</b>	9
NURS 503 Advanced Nursing Practice: Psychosocial (3)	
NURS 689 Integrative Systems Community Practicum (6)	
<b>Fall 2</b>	12
EPID 602 Public Health Organization and Management (3)	
EPID 604 Principles of Occupational and Environmental Health II (3)	

NURS 601 Advanced Professionalization II (1)  
NURS 620 Theoretical Perspectives of Community Health Nursing (3)  
NURS 655 Nurse as Leader (2)

**Spring 2**

12

EPID 603 Public Health Policy and Politics (3)  
EPID 691 Program Research Project (3)  
NURS 509 Advanced Nursing Practice: Community (3)  
NURS 689 Integrative Systems Community Practicum (3)

**Combined Master of Social Work (M.S.W.) and Master of Public Health (M.P.H.)****Admission requirements summary****Combined Master of Social Work (M.S.W.) and Master of Public Health (M.P.H.)****Public Health, Master of (M.P.H.)**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.P.H.	Fall	Priority given to applications received by Apr 1 Applications reviewed on a rolling basis until class is filled	GRE

**Special requirements:**

Students applying to joint M.D./M.P.H. program should be accepted to the VCU School of Medicine prior to applying to the M.D./M.P.H. program

MCAT or DAT acceptable in lieu of GRE for combined professional/academic degree programs

**Social Work, Master of (M.S.W.)**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.W.	<b>Regular Standing</b> Full-time – Fall Part-time – Fall	Feb 1 Feb 1	
	<b>Advanced Standing</b> Summer only – Richmond campus	Dec 1	

**Special requirements:**

If applying for off-campus program for concentration year, indicate location in item 5 on application

See Social Work [Web site](#) for supplemental academic information form.

Through a collaborative program between the VCU School of Social Work and the School of Public Health, students complete a three-year full-time program of study, including some summer course work, to obtain the Master of Social Work and Master of Public Health degrees. The purpose of this dual-degree program is to prepare graduates to work with individuals, families, groups, communities and/or organizations; advocate for social, health care and economic justice in a diverse and multicultural society; and promote physical and mental health across the life course.

Prospective students apply separately to both programs through the Graduate School. Once admitted to both programs, the student is assigned an adviser from each to develop a plan of study, typically starting with the M.S.W. course work. Students who begin one of the degree programs may also apply to the other during the first year of study. If admitted, an individualized program of study is developed and approved by both program directors.

Students are required to complete a minimum of 45 M.S.W. credits and a

minimum of 33 M.P.H. credits, for a total of 78 semester credit hours. During the third and last year of study, the dual-degree students are placed in internships through the School of Social Work that focus on public health; the program is approved by both the M.P.H. program director and the director of social work field instruction. A final research project that examines a relevant public health topic is required for the M.P.H.

## Rehabilitation and Movement Science, Doctor of Philosophy (Ph.D.)

### Admission requirements summary

#### Rehabilitation and Movement Science, Doctor of Philosophy (Ph.D.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall preferred	Applications received prior to Jan 9 will be given priority consideration	GRE

The Ph.D. in Rehabilitation and Movement Science is an interdisciplinary degree program developed through a collaborative partnership of the departments of Exercise Science, Physical Therapy, and Physical Medicine and Rehabilitation. The mission of this collaborative degree program is to prepare applied scientists capable of approaching multifaceted health care, preventive medicine and rehabilitation initiatives from an integrative rather than competitive perspective, and to prepare graduates to assume leadership positions in higher education teaching, research and management within rehabilitation and movement science.

There are two program tracks: cardiopulmonary and neuromusculoskeletal dynamics. The cardiopulmonary track prepares individuals to teach, conduct research and direct external funding initiatives in the area of cardiopulmonary rehabilitation and physiology, particularly in areas associated with metabolic and chronic disease states. The neuromusculoskeletal dynamics track prepares individuals for teaching, research and clinical initiatives associated with the identification and rehabilitation of movement disorders.

### Admission requirements

Admission decisions are made by an admissions committee comprised of faculty members from each of the major collaborating departments: Exercise Science, Physical Therapy and Physical Medicine and Rehabilitation. Applicants must have completed at least one of the following: a master's degree in a related area, 30 hours of postbaccalaureate work (e.g. course work at 500 level or greater), or a first professional degree program. Admission decisions are made only on the basis of a completed application packet.

Applicants for admission to the program must complete an admission packet that includes the VCU Application for Graduate Study as well as supplementary program materials. Admission packets are available from:

#### Graduate School

Virginia Commonwealth University  
Moseley House  
P.O. Box 843051  
Richmond, VA 23284-3051  
(804) 828-6916  
<http://www.vcu.edu/graduate>

or

#### Office of Doctoral Studies

Virginia Commonwealth University

P.O. Box 842020  
Richmond, VA 23284-2020  
(804) 827-2657  
<http://www.soe.vcu.edu>

The entrance requirements fall into the following three categories. All criteria must be completed for consideration for admission.

#### Academic criteria

- A completed VCU Graduate School Application.
- Two official and up-to-date copies of all transcripts of the applicant's undergraduate and graduate record indicating that the applicant has completed the minimum required prerequisite course work.
- Official and current scores (within the past five years) for the general test of the GRE. Older scores may be submitted and consideration will be based upon the time elapsed since last formal schooling, occupation success and research ability.
- Priority for admission will be given to the applicants who have attained at least 3.5 in all graduate work attempted and a combined verbal and quantitative score on the GRE of a minimum of 1,000. If the TOEFL is required, a minimum of 600 is expected (250 on the computer-based test).

#### External criteria

- A professional resume indicating an applicant's educational and career experience as well as evidence of research potential.
- Completed reference forms from three individuals capable of evaluating the applicant's academic and research potential.

#### Written expression

- A personal statement in which the applicant discusses his or her personal career goals and the manner in which this doctoral program would enhance those goals.
- A summary of motivation, education and aims in pursuing an interdisciplinary degree in rehabilitation and movement science.

Applicants being considered for admission must complete an interview with a Ph.D. admissions committee representative and/or research faculty member with whom the student would like to work.

The applicant is encouraged to check the status of his or her application packet to ensure that all components of the packet have been received. Inquiries should be made to the Office of Doctoral Studies. The Admissions Committee will not review incomplete packets.

### Transfer credit

Students in the program may transfer up to nine credit hours into the program, including courses taken at VCU prior to being admitted to the program. Note that credits earned for one degree cannot be applied to another degree.

### Curriculum

The Ph.D. in Rehabilitation and Movement Science will require a minimum of 36 credit hours of course work and 12 credit hours of dissertation research. Students will be required to complete:

- 12 credit hours of research core courses comprised of a research design class, two classes in statistical application and an elective in the area of research design or statistics;
- 18 credit hours in a concentration comprised of a focus on course work in a specific discipline formulated with the major adviser and approved by the Admissions Committee of the degree program;
- three credit hours comprised of laboratory rotations in a minimum of two laboratories within the Rehabilitation and Movement Science program; each credit hour requires a minimum of 50 contact hours in the laboratory selected;
- three credit hours of professional development comprised of an interdisciplinary research/journal club seminar (one credit hour), a teaching practicum (one credit hour) and a presentation delivered at a regional, national or international conference of a related discipline (one credit hour);
- 12 credit hours of dissertation research comprised of a focused line of research over a three-to-four-year period of doctoral work.

Required research courses for the program (nine credit hours) – both tracks:

	credits
STAT 543 Statistical Methods I	3
STAT 544 Statistical Methods II	3
ALHP 761 Health Related Sciences Research Design (or other approved course in research design)	3
Approved research design alternatives:	
HADM 761 Health Services Research Methods I	3
SOCY 602 Applications of Advanced Research Methods	3
EDUS 710 Educational Research Design	3

Elective research courses for the program (three credit hours) – both tracks:

	credits
BIOS 531 Clinical Epidemiology	3
BIOS 553-554 Applied Statistics	3
BIOS 571 Clinical Trials	3
BIOS 572 Statistical Analysis of Biomedical Data	3
BIOS 655 Quantitative Epidemiology	3
ALHP 716 Grant Writing and Project Management in Health Related Sciences (or elective research course in consultation with adviser)	3

Required concentration courses for the Ph.D. program tracks

	credits
<b>Cardiopulmonary track</b>	
PHIS 512 Cardiovascular Exercise Physiology	3
PHIS 604 Cell Physiology	4
PHIS 612 Cardiovascular Physiology	3
REMS/HEMS 601 Movement Physiology	3
REMS/HEMS 610 Laboratory Techniques in Rehabilitation and Movement Science	3
REMS/HEMS 675 Clinical Exercise Physiology	3
	19

### Neuromusculoskeletal dynamics track

(select 18 credits from the following):

REMS/HEMS 611 Biomechanics of Human Motion	3
REMS/HEMS 660 Neuromuscular Performance	3
REMS 665 Instrumentation in Motion Analysis	3
PHTY 602 Advanced Biomechanics	3
PHTY 605 Foundations of Pathokinesiology	3
PHTY 606 Therapeutic Kinesiology	3
PHTY 608 Advanced Musculoskeletal Sciences	3
REMS/HEMS 692 Independent Study or elective course	3

### Laboratory rotations (three credit hours) – both tracks:

REMS 710 Research Techniques in Rehabilitation and Movement Science	1-3
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### Professional development core (three credit hours) – both tracks

REMS 690 Research Seminar in Rehabilitation and Movement Science	1
REMS 793 Teaching Practicum in Higher Education	1
REMS 794 Research Presentation Seminar	1

### Research in rehabilitation and movement science (12 credit hours) – both tracks

REMS 798 Research in Rehabilitation and Movement Science	12
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## Advisory committee

### Adviser

Incoming students will identify a faculty member in the program with whom they would like to pursue their academic program and research endeavors. Every effort will be made to accommodate the student's first choice of a faculty adviser. If the student is unsure of a research interest and adviser selection, the Admissions Committee will assign an adviser. Within the first two semesters of attendance, a permanent adviser should be identified. The adviser, together with the student, will develop a plan of study for the student's didactic and scholarly program and will be responsible for guiding the student's academic progress such that the adviser will supervise the student's research work and dissertation preparation.

### Advisory committee

The student, in consultation with the adviser, will identify faculty members to serve on the advisory committee. The committee shall be appointed no later than the end of the spring semester following matriculation into the program. The student's advisory committee shall be comprised of five faculty members to include the adviser, two members from the rehabilitation and movement science faculty and two faculty members from other related departments. The student's adviser, who is active in the field of research the student has selected, will chair the committee.

## Comprehensive examination

Once core courses are successfully completed, students must pass written and oral comprehensive examinations before transitioning to candidacy. These examinations will test students on their basic knowledge of rehabilitation and movement science principles (primarily in their chosen track) and research methods as obtained through core, research and elective courses of the curriculum. The student must demonstrate a firm grasp of the material and the potential to become an independent researcher.

The written exam will be given to students during their second spring semester in the program. The written exam will consist of an area paper pertinent to the student's area of interest. The student's adviser and advisory committee must approve the topic and an outline of the area

paper. The student's adviser is responsible for grading the area paper. If a student receives a less than satisfactory grade on the area paper, he/she will be afforded the opportunity to make appropriate revisions. Students will only be allowed to revise the area paper once. The area paper should be a minimum of 15 double-spaced pages in 12-point font. The area paper must be in a form suitable for submission for publication to a journal whose content addresses topics consistent with the area paper. The student's adviser and advisory committee must approve the journal selection and manuscript prior to submission. A passing grade on the written exam is not contingent upon the manuscript being accepted for publication.

Following acceptance of the area paper, the student will write a research proposal. The structure of the proposal will follow federal grant submission guidelines such as those specified by the National Institutes of Health or the Centers for Disease Control. The analytical research proposal must be submitted to and approved by the student's advisory committee prior to the oral examination.

The oral exam should be conducted within three to six months of successful completion of the written exam with the goal of proceeding to candidacy by the end of the fall semester of the student's third year. The oral exam will be based on, but not primarily limited to, the student's proposed analytical research project. The student must receive a satisfactory grade from each committee member to pass the oral exam. The student may proceed to candidacy and begin the research outline in the proposal once successful completion of the oral examination is

achieved.

## **Exit requirements**

### **Dissertation defense**

Upon completion of all required course work and the research project, the student must prepare a dissertation to describe the research. A dissertation manual is available for download from the VCU Web site. Students are highly encouraged to become familiar with this manual and use it as a guide for preparation of their dissertation. All committee members must approve the written dissertation and the student must orally defend this dissertation in a publicly advertised seminar prior to graduation.

Students are expected to meet all university graduate school requirements regarding minimal GPA and limitation on credits achieved with a grade of "C" or below.

### **Time to degree**

The doctoral degree must be obtained within seven years of matriculation. It is expected that full-time students will satisfy all requirements within four to five years. Part-time students may take the full seven years to complete all courses and the research project.

# School of Nursing

The School of Nursing originated in 1893 as part of the University College of Medicine. Since then, the educational program has evolved from a basic diploma program to multiple programs at the baccalaureate, master's and doctoral degree levels. Additionally, the School of Nursing offers post-master's certificate programs. The School of Nursing takes pride in its long history of service to the profession of nursing and continues to be a leader in nursing education in Virginia.

## Accreditation

Nursing (baccalaureate and master's degrees)  
National League for Nursing Accrediting Commission (prelicensure programs) – approved by Virginia Board of Nursing  
61 Broadway, 33rd Floor, New York, NY 10006; (800) 669-1656, ext. 153

## Administration

730 E. Broad St.  
P.O. Box 980567  
Richmond, VA 23298-0567  
(804) 828-5171  
Fax (804) 828-7743  
[www.nursing.vcu.edu](http://www.nursing.vcu.edu)

**Nancy F. Langston**  
Dean

**Janet B. Younger**  
Professor and Associate Dean for Academic Programs

**Anthony J. DeLellis**  
Assistant Dean for Administration

## Clinical facilities

A variety of urban and rural agencies, including community medical centers and state hospitals, public health services, private clinics and offices, federal and state centers and departments are available for clinical study. These facilities provide generalized and specialized inpatient and ambulatory services. Selection of specific facilities for student experience is based upon curricular and advanced practice certification requirements, the educational needs of the individual student, and the services available.

## Nondegree-seeking students

Students who have not been admitted to a graduate program in nursing may be permitted, at the discretion of the School of Nursing, to enroll in individual courses. Only six credits earned as a nondegree-seeking student can be applied to the master's or doctoral degree. Only three credits earned as a nondegree-seeking student can be applied to the post-master's certificate.

## Enrollment

Students may begin study during summer and fall semesters. Students will have an academic adviser appointed and will follow the standard program of study. Once admitted, students are expected to abide by enrollment policies of the Graduate School.

## Transfer credit

Students may take 12 of the required credits for the respective program at another institution and transfer them to VCU. The School of Nursing will determine the acceptability of courses for transfer credit. Transcript evidence and description of courses are required for review of transfer credit.

## Scholarships, grants and loans

Applications for financial assistance must be filed for all forms of financial assistance, including traineeships. A Free Application for Federal Student Aid (FAFSA) may be obtained from the Office of Financial Aid, Virginia Commonwealth University, Richmond, VA 23298-0244.

Limited financial assistance is available through traineeships and scholarships administered by the School of Nursing. An application for financial assistance from School of Nursing sources will be made available to applicants and enrolled students. The school form must be completed in addition to the form for financial assistance from the Office of Financial Aid.

## Graduate programs

The School of Nursing offers programs leading to a Master of Science in Nursing, Post-master's Certificate in Nursing and Ph.D. in Nursing.

## Nursing, Certificate in (Post-master's certificate)

### Admission requirements summary

#### Nursing, Certificate in (Post-master's certificate)

(For master's prepared nurses who need courses for additional certification for advanced practice)

Indicate specialization

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Certificate	Fall preferred	Applications received by Feb 1 given priority consideration	

This program is available in nine concentration areas:

- adult health (acute and primary care)
- child health
- family health
- integrative psychiatric mental health nursing
- nurse practitioner residency in tertiary care
- nursing administration and leadership
- nursing education
- nursing in faith communities
- women's health

Applicants' previous master's course work will be evaluated individually to determine the number of credits required to meet overall program requirements.

### Admission requirements

Requirements for admission to the post-master's certificate program include:

- a master's degree or doctoral degree in nursing or an international equivalent,
- current license to practice as a registered nurse in Virginia

(professional liability insurance is recommended),

- three references from the applicant's graduate program and from employers/supervisors,
- a personal interview may be requested, and
- a complete graduate application filed with the Graduate School. Admission forms and instructions for applying to all graduate programs are available on the Graduate School Web site at [http://www.vcu.edu/graduate/ps/apply\\_options.html](http://www.vcu.edu/graduate/ps/apply_options.html).

## Graduation requirements

To be a candidate for the post-master's certificate, students must be recommended by the faculty and must:

- meet academic requirements of the Graduate School,
- complete all requirements for the prescribed curriculum within five calendar years of the first registration for work to be credited toward the certificate,
- earn at least a "B" or pass grade in all nursing courses,
- earn at least a cumulative grade-point average of 3.0 on a 4.0 scale in all work presented for graduation and
- conform to School of Nursing policies in respect to pass/fail grading for course work.

## Academic requirements

- A student may not proceed in the program with a GPA of less than 3.0 on a 4.0 scale or with a grade of less than "B" in any nursing course. Students earning less than "C" are referred to policy 6.4.1 in the School of Nursing Policy and Information Handbook on the Web: <http://www.nursing.vcu.edu/faculty/policy.htm>.
- An adviser for each student is appointed by the department chair. That adviser will assist the student in program and career planning, registration procedures, and certification for graduation.
- The departments of Adult Health Nursing, Integrative Systems and Maternal Child Health Nursing will assist respective students with advanced practice certification.

## Curriculum design

The School of Nursing recognizes that applicants to the post-master's certificate program bring a background of a master's or doctoral degree in nursing or are currently enrolled in a doctoral program. The curriculum for each concentration builds upon the knowledge gained in a previous master's degree including advanced practice, research and theory, and nursing specialty content. The post-master's certificate program allows students to enroll in an advanced practice specialty to pursue additional competencies or a certificate. The curriculum in the post-master's certificate program meets the standards of specialty organizations and the requirements for certification as an advanced practice nurse (nurse practitioner, clinical nurse specialist or other advanced practice roles).

When applicants are admitted, an evaluation of the transcript is conducted. Each required course in the relevant concentration is compared to the applicant's transcript and a judgment is made whether those course objectives have been fully or partially completed in prior master's or doctoral work. Prior courses that are accepted as evidence of full or partial

completion are listed on the program plan. The curriculum plan varies according to clinical focus. This plan will be signed by the student, the student's adviser and the associate dean for the master's program before the student actually enrolls in the program. Thus, the program of study is agreed upon in advance.

## Adult Health

The following plans are examples of curricula:

<b>Adult Health: Acute Care</b>	credits
NURS 502 Advanced Nursing Practice: Pharmacotherapeutics	3
NURS 504 Advanced Nursing Practice: Biological	3
NURS 511 Health Assessment for Advanced Nursing Practice	3
NURS 633 Common Health Problems of Women	1
NURS 660 Advanced Adult Health I	3
NURS 661 Advanced Adult Health II	4
NURS 663 Advanced Adult Health III	3
NURS 676 Adult Primary Practicum	2
NURS 678 Adult Acute Practicum (two semesters)	6
NURS 679 Advanced Adult Acute Practicum	3
NURS 682 Women's Practicum I	1
	<hr/> 32

<b>Adult Health: Primary Care</b>	credits
NURS 502 Advanced Nursing Practice: Pharmacotherapeutics	3
NURS 504 Advanced Nursing Practice: Biological	3
NURS 511 Health Assessment for Advanced Nursing Practice	3
NURS 633 Common Health Problems of Women	1
NURS 660 Advanced Adult Health I	3
NURS 661 Advanced Adult Health II	4
NURS 663 Advanced Adult Health III	3
NURS 676 Adult Primary Practicum (two semesters)	6
NURS 677 Advanced Adult Primary Practicum	3
NURS 678 Adult Acute Practicum	2
NURS 682 Women's Practicum I	1
	<hr/> 32

## Child Health

The following plans are examples of curricula:

<b>Child Health</b>	credits
NURS 502 Advanced Nursing Practice: Pharmacotherapeutics	3
NURS 503 Advanced Nursing Practice: Psychosocial	3
NURS 504 Advanced Nursing Practice: Biological	3
NURS 511 Health Assessment for Advanced Nursing Practice	3
NURS 633 Common Health Problems of Women	1
NURS 647 Health Promotion and Disease Prevention in Children	3
NURS 648 Management of Acute Problems of Children and Adolescents	3
NURS 649 Children with Special Health Care Needs	3
NURS 672 Child Practicum I	3
NURS 673 Child Practicum II	3
NURS 674 Child Practicum III	4
NURS 682 Women's Practicum I	1
IDDS 600C Interdisciplinary Studies in Developmental Disabilities: Teamwork in Serving Persons with Developmental Disabilities	3
NURS 650 Child Behavior and Mental Health	2
NURS 671 Practicum in Pediatric Behavioral and Mental Health	1
	<hr/> 39

## Family Health

The following plans are examples of curricula:



**Family Health**

NURS 502 Advanced Nursing Practice: Pharmacotherapeutics	3
NURS 504 Advanced Nursing Practice: Biological	3
NURS 511 Health Assessment for Advanced Nursing Practice	3
NURS 633 Common Health Problems of Women	3
NURS 634 Advanced Practice: The Childbearing Woman	2
NURS 647 Health Promotion and Disease Prevention in Children	3
NURS 648 Management of Acute Problems of Children and Adolescents	3
NURS 660 Advanced Adult Health I	3
NURS 661 Advanced Adult Health II	4
NURS 670 Primary Care of Families	3
NURS 672 Child Practicum I	3
NURS 676 Adult Primary Practicum	3
NURS 682 Women's Practicum I	3
NURS 684 Family Practicum	4

43

**Integrative Psychiatric Mental Health Nursing**

The following plans are examples of curricula:

**Integrative Psychiatric Mental Health Nursing**

NURS 502 Advanced Nursing Practice: Pharmacotherapeutics	3
NURS 511 Advanced Nursing Practice: Health Assessment	3
NURS 540 Spirituality in Health Care	3
NURS 622 Integrative Psychiatric Mental Health Nursing Practicum I	4
NURS 623 Integrative Psychiatric Mental Health Nursing Practicum II	5
NURS 624 Integrative Psychiatric Mental Health Nursing Practicum III	5
NURS 654 Nurse as Therapist	3
NURS 655 Nurse as Leader	2
NURS 656 Integrative Mental Health Nursing: Management and Treatment of Psychopathology for Advanced Practice Nurses	3
NURS 657 Integrative Mental Health Nursing: Contemporary Practice	4
NURS 658 Complementary Healing Modalities	3
NURS 659 Integrative Mental Health Nursing: Synthesis	4

42

**Nurse Practitioner Residency in Tertiary Care**

A post-master's nurse practitioner residency program is offered in cooperation with the VCU School of Medicine and the VCU Medical Center. The experience occurs as a component of full-time employment with the VCU Medical Center's MCV Hospitals or another partnering hospital. The residency consolidates skills for application in a complex, tertiary clinical environment such as the VCU Medical Center. Students obtain assistance in the transition of their research skills to evidence-based practice clinical environments. The anticipated outcome for the student is to move from a beginning clinician to a very competent clinician. The increased competence will occur in aspects of disease management, working with patients of diverse cultures and backgrounds, and working more effectively with a health care team. Further outcomes will be the student's integration of the knowledge and practice of both nursing and disease management. The student also will acquire skills of assessing clinical outcomes attributable to the student's performance and some experience teaching less experienced students.

The credit hours allocated for the post-master's courses leading to a certificate represent that part of the time conceptualized as devoted to new learning at a more advanced level. The remaining time is conceptualized as employment, for which there are assigned, related duties and supervised practice opportunities. Employment at the VCU Medical Center

offers the benefit of tuition reimbursement for six credit hours per semester at VCU.

credits

NURS 696 Nurse Practitioner Residency I 6

NURS 697 Nurse Practitioner Residency II 6

NURS 698 Nurse Practitioner Residency III 6

Total

18

**Nursing Administration and Leadership**

The following plans are examples of curricula:

**Nursing Administration and Leadership\***

NURS 505 Advanced Nursing Practice: Computer and Information Technology	1
NURS 655 Nurse as Integrative Leader	2
NURS 680 Leading People	3
NURS 681 Nurses as Organizational Leaders	3
NURS 687 Management Systems and Health Care Outcomes	4
NURS 690 Application for Financial Concepts	4
NURS 692 Integrative Administrative Systems Practicum I	3
NURS 693 Integrative Administrative Systems Practicum II	3
NURS 694 Integrative Administrative Systems Practicum III	4
Accounting elective	3

30

\* Nursing administration courses are not offered every year. Students should consult their advisers for a schedule of classes.

**Nursing Education**

The Post-master's Certificate in Nursing Education is designed to meet the needs of current and potential nursing faculty whose graduate preparation is clinically focused. Students will be advised as to which university courses they should take based on their individual backgrounds, goals and employment settings. Components of the didactic content will be presented online in order to meet the needs of potential faculty across the state.

Applicants who have completed a graduate degree and who meet our general requirements for graduate admission are eligible for admission. Further, students concurrently enrolled in the master's or doctoral program and have completed at least 18 credit hours in graduate nursing courses are eligible for admission.

University courses*	9
NURS 602 Nursing Education	3
NURS 603 Nursing Education Practicum: Classroom	3
NURS 604 Nursing Education Practicum: Clinical	4



Total 19

\* Choose from the following list of university courses:

EDUS 601 Philosophy of Education  
 EDUS 610 Social Foundations of Education  
 EDUS 661 Educational Evaluation: Models and Design  
 TEDU 615 Curriculum Development  
 EDUS 662 Educational Measurement and Evaluation  
 EDUS 609 Learning Theories in Education  
 SELD 600 Characteristics of Persons with Learning Disabilities  
 ADMS 701 Development and Implementation of Administrative Policies in Education  
 ADMS 702 Educational Administration: Contemporary Theory and Practice  
 ADMS 707 Advanced Educational Law  
 ALHP 712 Curriculum and Communication Design for Health Care Professionals  
 ADLT 601 Adult Learner  
 ADLT 631 American Colleges and Universities  
 ADLT 632 Changing Face of Higher Education  
 ADLT 633 Academic Leadership in Higher Education  
 GRAD 601 The Academic Profession  
 GRAD 602 Seminar in College Teaching  
 GRAD 604 Seminar in Teaching the Professions  
 GRAD 605 Professional Specialty Seminars

### Nursing in Faith Communities

The following plans are examples of curricula:

#### Nursing in Faith Communities

NURS 503 Advanced Nursing Practice: Psychosocial	3
NURS 509 Advanced Nursing Practice: Community	3
NURS 540 Spirituality in Health Care	3
NURS 689 Integrative Systems Practicum	3
NURS 740 Theoretical Perspectives in Healing	3
Elective (theology, religious studies, pastoral care, criminal justice, comparative religion or complementary health care)	3
	<hr/> 18

### Women's Health

The following plans are examples of curricula:

#### Women's Health

NURS 502 Advanced Nursing Practice: Pharmacotherapeutics	3
NURS 504 Advanced Nursing Practice: Biological	3
NURS 511 Health Assessment for Advanced Nursing Practice	3
NURS 632 Health Promotion in Women	2
NURS 633 Common Health Problems of Women	3
NURS 634 Advanced Practice: The Childbearing Woman	3
NURS 661 Advanced Adult Health II	3
NURS 676 Adult Primary Practicum	2
NURS 682 Women's Practicum I	2
NURS 683 Women's Practicum II	4
NURS 685 Women's Practicum III	5
	<hr/> 33

### Nursing, Doctor of Philosophy (Ph.D.)

#### Admission requirements summary

##### Nursing, Doctor of Philosophy (Ph.D.)

Indicate focus area:

Behavioral Clinical, Healing, Immunocompetence, or Risk and Resilience

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall of even years: full and part-time study	For funding/scholarship consideration: Dec 1	GRE
	Fall of odd years: part-time study only requested)	Priority consideration for applications (no funding requested): Feb 1	

Note: Applications may be accepted after the Feb 1 deadline on space-available basis.

The goal of the doctoral program in nursing is the preparation of scholars to develop knowledge in the discipline of nursing. The program examines knowledge development in nursing through an understanding of the impact of a wide range of historical influences on the discipline and through analysis of how emerging societal issues influence knowledge development. Knowledge in the humanities and social sciences and an understanding of knowledge development in other disciplines is viewed as foundational to a full understanding of knowledge development in nursing. Methodologic competency (i.e., knowledge of research designs, methodologies and tools) is also essential to a full understanding of the scope, range and path of knowledge development and the relevance to nursing practice. Substantive areas of study are healing, risk and resiliency, biobehavioral clinical research, and immunocompetence.

#### Program outcomes

At the completion of the doctoral program, the student will be able to:

1. apply, transmit and generate knowledge in the discipline of nursing,
2. construct, test and modify theories for nursing in the context of social, ethical, scientific, cultural and economic influences,
3. analyze and synthesize knowledge from related disciplines for use in nursing,
4. exhibit scientific integrity in scholarly inquiry, and
5. engage in interdisciplinary collaboration in knowledge development and dissemination.

#### Admission

All applicants to the Ph.D. Program in Nursing must meet the following admission requirements:

1. Applicants must have both a baccalaureate and a master's degree, one of which must be in nursing. The degree in nursing must be from an accredited school or international equivalent.
2. Applicants must have a master's GPA of 3.0 or better on a 4.0 scale.
3. Applicants must have acceptable scores on the General Test of the Graduate Record Exam.
4. Applicants must have a three-credit statistics course or equivalent with a passing grade of "B" or better.
5. Applicants must have licensure as a R.N. International applicants must have an equivalent credential.

All applicants must complete and submit the following materials:

1. Application forms and instructions for applying to all graduate programs are available on the Graduate School Web site at

[http://www.vcu.edu/graduate/ps/apply\\_options.html](http://www.vcu.edu/graduate/ps/apply_options.html).

2. Official transcripts from all previous universities and colleges attended for all graduate and undergraduate work.
3. A typed, personal statement from the applicant summarizing professional and academic experience including prior research experience, research interests, immediate and long-range professional goals, and rationale for pursuing advanced study (see [guidelines for writing the personal statement for doctoral admissions](#)).
4. A resume that includes applicant's name and address, past educational degrees, past work experiences, professional affiliations, certifications, honors and awards, presentations, and publications.
5. References from three persons who can knowledgeably comment upon applicant's ability to succeed in an academic program (i.e., former faculty) or who can evaluate applicant's ability to be successful in nursing research. Avoid getting references from ministers or others who are not familiar with professional and academic abilities; from friends, either professional or personal; or from personal health care providers.
6. A personal interview is required.

#### Post B.S.-Ph.D. entry option

All applicants to the Post B.S.-Ph.D. entry option must meet the following admission requirements:

- Applicants must have a baccalaureate degree in nursing. The degree must be from an accredited school or international equivalent.
- Applicants must have a GPA of 3.0 or better on a 4.0 scale.
- Applicants must have acceptable scores on the General Test of the Graduate Record Exam.
- Applicants must have the R.N. licensure. International applicants must have an equivalent credential.

#### Admission to candidacy

Before admission to candidacy for the doctorate, students must have (1) satisfied the language requirement, if applicable, (2) completed all required course work, (3) successfully completed the comprehensive examination and (4) fulfilled any additional requirements.

### Comprehensive examinations

The student will request to take the comprehensive examination at the first available testing date following completion of the doctoral course work for the Ph.D. program (approximately six weeks after the last day of class). The dates for the examination will be posted for the year and will be offered in February, June/July and September/October. The student will request the exam through completion of the Ph.D. Comprehensive Examination Request Form available from the Office of the Associate Dean for Academic Programs or by downloading it from the Web. The student is required to obtain a signature from the adviser who verifies that the student has completed all required courses before submitting the form to the associate dean.

A six or seven member committee of faculty appointed by the associate dean for academic programs will write and evaluate the exam questions. The committee is composed of faculty for philosophy and theory, research

design and methods, and the focus areas of risk and resilience, healing, biobehavioral clinical, and immunocompetence including the faculty adviser. The examination will have four questions and will not be available to the students beforehand. The examination is an in-class examination (open book) allowing four hours per question (one question per day). All students will answer the same questions for the exam period with the exception of the specific focus question. These questions will test knowledge in:

1. philosophy and theory,
2. research designs and methods,
3. the focus area (general) and
4. the focus area (specific to the student's area of interest).

The schedule for the questions is as follows:

Monday – philosophy and theory  
 Tuesday – research designs and methods  
 Wednesday – focus (general)  
 Thursday – focus (specific)

The administration of the examination is managed through the Office of the Associate Dean and a computer will be available for each student's use in the testing site. Upon completion of each question, the answer is submitted to the associate dean's office. At the end of the allotted time period each day, the student will submit a disk with the response to the examination question (with the social security number at the top of each page) to the Office of the Associate Dean. No names will be included on the examination. The associate dean designee will print the copy of the answers in the student's presence. The four-hour time allotment allows students the opportunity to proofread their response and does not require any further editing. There will be a written examination only, with no oral clarification of results.

### Curriculum

	credits
<b>Core content</b> (all students)	
<b>Philosophy and theory courses</b>	9
NURS 703 Philosophy of Human Sciences	
NURS 704 Theoretical Structures for Nursing Knowledge	
NURS 705 Theory Construction in Nursing	
<b>Research methods and statistics</b>	22
(required of all students)	
NURS 770 Quantitative Research Design	
NURS 772 Qualitative Research Design	
NURS 773 Perspectives on Research Design	
NURS 774 Qualitative Data Analysis	
Advanced statistics or methods	
BIOS/STAT 543 Statistical Methods I	
BIOS/STAT 544 Statistical Methods II	
MICR 510 Scientific Integrity	
NURS 797 Research Practicum	
<b>Focus of inquiry</b> (one three-credit introductory course in focus area required)	14
NURS 720 Foundations of Biobehavioral Clinical Research	
NURS 740 Theoretical Perspectives in Healing	
NURS 750 Risk and Resilience Across the Life Span	
NURS 760 Foundations of Immunocompetence	
Courses selected by student and adviser (six credits) may be taken as NURS 791 and 792	
NURS 796 Directed Research	
<b>Research program development</b>	3

NURS 776, 777, 778 Research Program Development I, II, III

<b>Advanced methods</b>	3
NURS 771 Instrument Development	
NURS 775 The Ethnographic Approach to Knowledge Generation in Nursing	
Elective courses from other disciplines	
<b>Dissertation</b>	12
NURS 898 Dissertation	
	<hr/> 63

Each student will be assigned an adviser with related research interests to finalize the student's plan of study. This curriculum structure requires the student and adviser to make several choices:

- the selection of a focus area,
- the choice of advanced methodological courses, or
- the selection of faculty for directed research or research practicum.

The credits indicated above are in addition to any course prerequisites.

## Dissertation

The student must conduct a substantial independent investigation and prepare a dissertation reporting the results of this research and analyzing its significance in relation to existing scientific knowledge. Satisfactory completion of the comprehensive examination and a satisfactory oral defense of the dissertation proposal are required prior to commencement of actual work outlined in the proposal. Once approved, the dissertation proposal is similar to a formal contract between the student and dissertation committee about the nature of the dissertation. The dissertation committee must consist of a minimum of four members. Any member of the graduate faculty of the School of Nursing may chair the dissertation committee. Other committee members must include one faculty member from the student's focus area and one member from outside the School of Nursing. The dissertation committee is approved by the Associate Dean for Academic Programs in the School of Nursing. (The required form is available at [www.nursing.vcu.edu](http://www.nursing.vcu.edu)). An oral defense of the dissertation is conducted by the student's dissertation committee. The student is responsible for preparing the dissertation in accordance with the most current version of the Graduate School Thesis and Dissertation Manual on the Web at [www.vcu.edu/graduate/es/thesis.html](http://www.vcu.edu/graduate/es/thesis.html).

## Nursing, Master of Science (M.S.)

### Admission requirements summary

#### Nursing, Master of Science (M.S.)

Indicate specialization: Adult Health (Indicate Acute or Primary NP or CNS as track), Child Health, Family Health, Nursing Administration and Leadership, Integrative Psychiatric Mental Health Nursing or Women's Health

List as track: Traditional M.S. (for R.N. with B.S. in Nursing); Non B.S.N.-M.S. program (for R.N. with B.S./B.A. in another discipline); or R.N.-M.S. (for R.N. with Associate's or Diploma in Nursing)

#### Entry-level program for the qualified non-R.N. student who has earned a bachelor's degree in another discipline

Indicate specialization: Adult Health (indicate Acute or Primary as track), Child Health, Family Health, Nurse Executive, Psychiatric Mental Health, Women's Health; list Accelerated Second Degree as track

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.	Fall only	Applications received by Feb 1 given priority consideration	GRE
Entry-level program	Summer only	Applications received by Dec 1 given priority consideration	

The graduate program in nursing is based on the goals and the philosophy of the university and the School of Nursing. Differentiation between the undergraduate and the graduate programs is reflected in the philosophy and purpose of graduate education, the characteristics of the graduates and the program objectives. The graduate program is designed to respond to national nursing needs through creative, flexible approaches to graduate nursing education.

Graduate education is professionally oriented and has three major thrusts: (1) integration of three processes including transmission, utilization and development of knowledge in an advanced practice area, (2) development of increased skill in application of knowledge to advanced practice and (3) development of an awareness of the interaction between social, cultural, political and economic forces that have an impact on nursing practice in complex health care delivery systems. Advanced study emphasizes analysis and synthesis of knowledge from nursing and related disciplines with systematic investigation of underlying concepts. Graduates of this program should integrate this new knowledge into nursing practice. Graduates should occupy pivotal roles to improve health care and influence health policy in political arenas. With these three thrusts, graduates of this program have a knowledge base for further research and doctoral study.

Graduate education is directed toward professional practitioners who are self-directed in setting educational goals and in determining learning strategies best suited for their cognitive styles. With guidance and direction, adult learners should be able to integrate past experiences with current learning situations to expand their approaches to problem solving. Graduate education permits greater autonomy in more diverse environments for learning and practice including the political arena, all levels of the health care delivery system and community agencies whose missions are directed toward meeting the health needs of their clients. The graduate program in nursing:

- prepares nurses for advanced practice in an area of specialization utilizing their own conceptual framework, constructed through advanced study,
- prepares nurses for advanced practice in an increasingly technological society,
- develops leadership skills in an advanced practice area and
- provides a foundation for further research and scholarly study.

The School of Nursing offers programs of study leading to the Master of Science degree. Concentrations combining major study in advanced practice nursing are:

	credits
Adult health (acute care)	50
Adult health (clinical nurse specialist)	51
Adult health (primary care)	50
Child health	47
Community health	31
Community health and public health	58
Family health	57

Integrative psychiatric mental health	55
Nursing administration and leadership	44
Women's health	48

## Administration

**Janet B. Younger**

Associate Dean for Academic Programs

## Admission requirements and procedures

The purpose of the following admission requirements and procedures is to encourage applications from competent students and to ensure selection of those whose ability, education and motivation qualify them to pursue successful graduate study in nursing.

To be considered for admission, an applicant must have:

- a Bachelor of Science in Nursing from an NLN-accredited school or a baccalaureate degree in another field with a lower division nursing education (associate degree or diploma). Applicants who hold a baccalaureate degree in another field who are not registered nurses are eligible for admission to the accelerated second degree program (entry-level master's program). Applicants for this track are admitted to the graduate program and pay graduate fees.
- transcripts reflecting completion of undergraduate courses in statistics and health assessment (health assessment not required for accelerated second degree students and nursing administration and leadership students). In addition, all nursing administration and leadership students are required to have undergraduate courses in accounting, economics or microeconomics. Economics or microeconomics and accounting may be taken after admission to the graduate program. Students should consult with their advisers regarding specific course selection. Additional prerequisites for the accelerated second degree option are five to eight credit hours of anatomy and physiology, three credit hours of developmental psychology and six credit hours of English composition (or satisfactory completion of the writing requirements of the student's undergraduate program).
- acceptable scores on the Graduate Record Examination (GRE) general test.
- a current unrestricted registered nurse license in a state, Washington, D.C., or a U.S. possession or territory, or an international equivalent. For accelerated second degree students, license is required within 90 days after completion of baccalaureate degree in nursing in order to remain enrolled in graduate courses.
- passing scores on the Qualifying Exam of the Commission on Graduates of Foreign Nursing Schools (CGFNS) prior to application if he or she is a graduate of a foreign nursing school licensed outside of the United States. (Include the exam report in the application materials.)
- references from the applicant's undergraduate program and from employers/supervisors.
- a personal interview (if requested).

Professional liability insurance is highly recommended.

Application forms and instructions for applying to all graduate programs are available on the Graduate School Web site at

<http://www.vcu.edu/graduate>.

Additional program information and advisement can be obtained through the Office of Enrollment and Student Services, 1220 E. Broad St., P.O. Box 980567, Richmond, VA 23298-0567; phone (804) 828-5171 or toll free (800) 828-9451; fax (804) 828-7743; e-mail: [vcu\\_nurse@hsc.vcu.edu](mailto:vcu_nurse@hsc.vcu.edu) or visit the School of Nursing Web site: <http://www.nursing.vcu.edu>.

Applications are reviewed by the School of Nursing. Applicants will be notified of action by the dean of the Graduate School. Applicants who are granted provisional admission are responsible for satisfying the provision or may be subject to dismissal. Applicants should accept an admission offer in writing and submit a tuition deposit as instructed in their admission letters. The tuition deposit is not refundable, but will be applied to tuition during the first semester of enrollment in courses.

## Graduation requirements

To be a candidate for the degree of Master of Science in Nursing, students must be recommended by the faculty and must:

- meet academic requirements of the Graduate School,
- complete all requirements for the prescribed curriculum within five calendar years of the first registration for work to be credited toward the degree,
- earn at least a "B" or pass grade in all nursing courses,
- earn at least a cumulative grade-point average of 3.0 on a 4.0 scale in all work presented for graduation and
- conform to School of Nursing policies in respect to pass/fail grading for course work or thesis study.

The degree will be granted only after all requirements have been fulfilled, all fees to the university have been paid and bound copies of the thesis have been submitted. Degrees are not granted in absentia unless written request is made to the dean and permission is granted.

## Academic requirements

- A student may not proceed in the program with a GPA of less than 3.0 on a 4.0 scale or with a grade of less than "B" in any nursing course. In exceptional circumstances, an appeal for progression may be made to the Graduate Curriculum and Evaluation Committee. Students earning less than a "C" are referred to policy 6.4.1 in the School of Nursing Policy and Information Handbook (<http://www.nursing.vcu.edu/faculty/policy.htm>).
- An adviser for each student is appointed by the department chair. That adviser will assist the student in program and career planning, registration procedures, and certification for graduation.
- The departments of Adult Health Nursing, Integrative Systems and Maternal Child Health Nursing will assist respective students with advanced practice certification.
- Following are the requirements for students electing the thesis option:

Committee formation:

- With the approval of the department chair, the student selects a thesis committee of not fewer than three university faculty. One member must be outside the major department and may be outside the School of Nursing.

- The student selects the committee chair from School of Nursing graduate faculty, but not necessarily from the student's major department.
- The student provides each member of the committee with a copy of the thesis in accordance with the Graduate School Thesis and Dissertation Manual.

## Committee responsibilities:

- The committee monitors the design and conduct of the research and the preparation of the thesis.
- The committee serves as the examining committee for the thesis.
- Committee members read and approve the thesis and participate in the final oral examination of the student. The final examination is open to faculty and students. The time and place, together with the candidate's name, department and thesis title, shall be announced in the School of Nursing 10 days in advance of the examination.

## Outcome:

- Each member of the examining committee will attend and cast a vote.
- A favorable vote of the examining committee with no more than one negative vote shall be required to pass the oral examination.

Core courses	credits
NURS 501 Advanced Professionalization I	1
NURS 502 Advanced Nursing Practice: Pharmacotherapeutics	3
NURS 503 Advanced Nursing Practice: Psychosocial	3
NURS 504 Advanced Nursing Practice: Biological	3
NURS 508 Advanced Nursing Practice: Systems	3
NURS 509 Advanced Nursing Practice: Community*+	3
NURS 511 Health Assessment for Advanced Nursing Practice	3
NURS 512 Advanced Nursing Science	3
NURS 601 Advanced Professionalization II	1

\* Adult Health Clinical Nurse Specialist students select 509.

+ Child health students substitute IDDS 600 Interdisciplinary Studies in Developmental Disabilities: Teamwork in Serving Persons with Developmental Disabilities

## Accelerated second degree

In response to the growing number of individuals with baccalaureate degrees in other disciplines who are now seeking a career in nursing, the School of Nursing offers a graduate program whereby an individual can earn a baccalaureate and masters degree in nursing. Students in the Accelerated Second Degree program take courses in the undergraduate and masters programs until licensure as an R.N. is obtained. It is anticipated that this will occur at the end of the fifth semester. The masters degree is awarded after two to four semesters of additional study depending on the area of concentration. This program begins in the summer. See the School of Nursing Web site for details.

[www.nursing.vcu.edu/prospective/accel.html](http://www.nursing.vcu.edu/prospective/accel.html).

	credits
<b>Summer 0</b>	
NURS 201 Concepts of Nursing	3
NURS 202 Technologies of Nursing Practice	4
NURS 261 Health Assessment for Nursing Practice	3

**Fall 1**

NURS 335 Nursing of Women	6
NURS 345 Nursing of Children	6

NURS 504 Advanced Nursing Practice: The Biological Basis of Health and Illness Across the Lifespan	3
NURS 512 Advanced Nursing Science	3

**Spring 1**

NURS 325 Nursing of Adults I	6
NURS 355 Psychiatric-Mental Health Nursing	5
NURS 502 Advanced Nursing Practice: Pharmacotherapeutics	3
NURS 508 Advanced Nursing Practice: Systems	3

**Summer 1**

NURS 425 Nursing of Adults II	6
NURS 476 Professional Transitions	1
NURS 503 Advanced Nursing Practice: Psychosocial	3

**Fall 2**

NURS 415 Community Health Nursing	5
NURS 496 Senior Synthesis	5
NURS 501 Advanced Professionalization I	1
NURS 511 Health Assessment for Advanced Nursing Practice	3
NURS 647 Health Promotion and Disease Prevention in Children	3

**Spring 2**

NURS 633 Common Health Problems of Women	3
NURS 634 Advanced Practice: The Childbearing Woman	2
NURS 648 Management of Acute Problems of Children and Adolescents	3
NURS 672 Child Practicum I	3

**Summer 2**

NURS 682 Women's Practicum I	3
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**Fall 3**

NURS 660 Advanced Adult Health I	3
NURS 661 Advanced Adult Health II	4
NURS 670 Primary Care of Families	3
NURS 676 Adult Primary Practicum	3

**Spring 3**

NURS 509 Advanced Nursing Practice: Community	3
NURS 601 Advanced Professionalization II	1
NURS 684 Family Practicum	4

<b>Total</b>	<b>106</b>
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## Adult health

The adult health concentrations include acute and primary care. Students also may select a role; current role options are the nurse practitioner or the clinical nurse specialist. The nurse practitioner role focuses on the provision of advanced independent nursing care integrated with delegated medical diagnostic and management activities. The adult primary care nurse practitioner has a practice located in an ambulatory care setting and focuses on health promotion, risk reduction and evidence-based primary care to individual patients. The adult acute care nurse practitioner generally works in an acute care setting, often within a multidisciplinary team focused on the provision of evidence-based care to adults who are acutely ill. The sphere of influence of the nurse practitioner is that of the patient. The clinical nurse specialist focuses on advanced nursing care to a specific population of adults. The clinical nurse specialist is responsible for ensuring excellence in the delivery of nursing care to patients within that population. This includes consultation with individual patients as well as with nurses who provide care to the patient in an acute care setting, and overall systems management to facilitate care. The site of practice is determined by the location of the patient population of interest — it may be in a primary care setting, for example, people undergoing chemotherapy. The sphere of influence of the clinical nurse specialist is threefold: patient,



nursing personnel and systems/organizations.

In addition to the core course requirements, the following concentration courses are required.

	credits
<b>Adult Health: Acute Care Nurse Practitioner</b>	
NURS 633 Common Health Problems of Women	2
NURS 660 Advanced Adult Health I	3
NURS 661 Advanced Adult Health II	4
NURS 663 Advanced Adult Health III	3

<b>Adult Health: Primary Care Nurse Practitioner</b>	
NURS 633 Common Health Problems of Women	2
NURS 660 Advanced Adult Health I	3
NURS 661 Advanced Adult Health II	4
NURS 663 Advanced Adult Health III	3

<b>Adult Health: Clinical Nurse Specialist</b>	
NURS 660 Advanced Adult Health I	3
NURS 663 Advanced Adult Health III	3
NURS 687 Management Systems and Health Care Outcomes	4
ADLT 603 Instructional Strategies for Adults	3

#### Concentration practicum courses

(varies by concentration)

NURS 675 Adult Immunocompetence Practicum I	1-3
NURS 676 Adult Primary Practicum	2-6
NURS 677 Advanced Adult Primary Practicum	2-5
NURS 678 Adult Acute Practicum	2-6
NURS 679 Advanced Adult Acute Practicum	2-5

### Child health

In addition to the core course requirements, the following concentration courses are required.

	credits
<b>Child Health Nursing</b>	
NURS 633 Common Health Problems of Women	1
NURS 647 Health Promotion and Disease Prevention in Children	3
NURS 648 Management of Acute Problems of Children and Adolescents	3
NURS 649 Children with Special Health Care Needs	3
NURS 650 Child Behavior and Mental Health	2
IDDS 600 Interdisciplinary Teamwork	3

#### Concentration practicum courses

(varies by concentration)

NURS 672 Child Practicum I	1-3
NURS 673 Child Practicum II	1-3
NURS 674 Child Practicum III	1-4
NURS 671 Practicum in Pediatric Behavioral and Mental Health	1

### Combined Master of Science in Nursing (M.S.) and Master of Public Health (M.P.H.)

#### Admission requirements summary

**Public Health, Master of (M.P.H.)**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.P.H.	Fall	Priority given to applications received by Apr 1	GRE
		Applications reviewed on a rolling basis until class is filled	

#### Special requirements:

Students applying to joint M.D./M.P.H. program should be accepted to the VCU School of Medicine prior to applying to the M.D./M.P.H. program

MCAT or DAT acceptable in lieu of GRE for combined professional/academic degree programs

#### Nursing, Master of Science (M.S.)

Indicate specialization: Adult Health (Indicate Acute or Primary NP or CNS as track), Child Health, Family Health, Nursing Administration and Leadership, Integrative Psychiatric Mental Health Nursing or Women's Health

List as track: Traditional M.S. (for R.N. with B.S. in Nursing); Non B.S.N.-M.S. program (for R.N. with B.S./B.A. in another discipline); or R.N.-M.S. (for R.N. with Associate's or Diploma in Nursing)

#### Entry-level program for the qualified non-R.N. student who has earned a bachelor's degree in another discipline

Indicate specialization: Adult Health (indicate Acute or Primary as track), Child Health, Family Health, Nurse Executive, Psychiatric Mental Health, Women's Health; list Accelerated Second Degree as track

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.	Fall only	Applications received by Feb 1 given priority consideration	GRE

Entry-level program	Summer only	Applications received by Dec 1 given priority consideration
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The School of Nursing and the School of Medicine's Department of Epidemiology and Community Health offer a dual-degree program with a focus in community health nursing and public health that leads to two degrees: Master of Public Health and Master of Science in Nursing. The five-semester program meets the accreditation requirements of both disciplines and is tailored to meet the needs of students who want to have a public health degree in conjunction with a clinical degree. The program is designed to prepare students with the skills, knowledge and competencies necessary to conduct needs assessments of populations; perform program planning and evaluation; understand the effects of contemporary issues and health policies on the public's health; and provide care and services to prevent disease and promote and preserve the health of populations. Students may enroll for part-time study.

Applicants must successfully meet the admissions requirements of both the M.P.H. program and the M.S. in Nursing program. Applications should be sent to the Graduate School. Applications will then be reviewed in the School of Nursing by a joint review committee comprised of faculty from both schools. Advisers will be assigned from the School of Nursing.

#### Curriculum

Typical course plan for dual-degree program:

#### Fall 1

BIOS/STAT 543 Statistical Methods I (3)	credits
EPID 571 Epidemiology I: Principles of Epidemiology (3)	13
EPID 600 Introduction to Public Health (3)	
NURS 501 Advanced Professionalization I (1)	
NURS 512 Advanced Nursing Science (3)	

<b>Spring 1</b>	12
EPID 605 Epidemiology of Health Behaviors (3)	
EPID 606 Epidemiology II: Epidemiologic Methods (3)	
NURS 508 Advanced Nursing Practice: Systems (3)	
NURS 689 Integrative Systems Community Practicum (3)	

<b>Summer</b>	9
NURS 503 Advanced Nursing Practice: Psychosocial (3)	
NURS 689 Integrative Systems Community Practicum (6)	

<b>Fall 2</b>	12
EPID 602 Public Health Organization and Management (3)	
EPID 604 Principles of Occupational and Environmental Health II (3)	
NURS 601 Advanced Professionalization II (1)	
NURS 620 Theoretical Perspectives of Community Health Nursing (3)	
NURS 655 Nurse as Leader (2)	

<b>Spring 2</b>	12
EPID 603 Public Health Policy and Politics (3)	
EPID 691 Program Research Project (3)	
NURS 509 Advanced Nursing Practice: Community (3)	
NURS 689 Integrative Systems Community Practicum (3)	

## Community Health

The School of Nursing offers a concentration in community health for nurses who already have a Master of Public Health degree that leads to a Master of Science in Nursing with a focus in community health. This program requires 31 credits over three semesters of full-time study. Students may enroll for part-time study.

Applicants must successfully meet the admission requirements of the M.S. in Nursing program. In addition, applicants must show evidence of a Master of Public Health degree from an accredited program.

Applications should be sent to the Graduate School. Application will be reviewed by the School of Nursing and advisers will be assigned from the School of Nursing. In addition to the core course requirements, the following concentration courses are required.

	credits
NURS 620 Theoretical Perspectives of Community Health Nursing	3
NURS 655 Nurse as Leader	2
<b>Concentration practicum courses</b> (varies by concentration)	
NURS 689 Integrative Systems Community Practicum	12

## Family health

In addition to the core course requirements, the following concentration courses are required.

	credits
<b>Family Health Nursing</b>	
NURS 633 Common Health Problems of Women	3
NURS 634 Advanced Practice: The Childbearing Woman	2
NURS 647 Health Promotion and Disease Prevention in Children	3
NURS 648 Management of Acute Problems of Children and Adolescents	3
NURS 661 Advanced Adult Health II	4
NURS 670 Primary Care of Families	3
<b>Concentration practicum courses</b> (varies by concentration)	
NURS 684 Family Practicum	1-4

## Integrative psychiatric mental health

The integrative psychiatric mental health concentration prepares graduates for roles as clinical nurse specialists/nurse practitioners in adult psychiatric mental health nursing. The curriculum is designed with an emphasis on content requisite for certification by the American Nurses Credentialing Center. Students enrolled in the integrative psychiatric mental health concentration will have experiences that reflect both the nurse practitioner and the clinical nurse specialist roles associated with the specialty.

In addition to the core course requirements, the following concentration courses are required.

	credits
<b>Integrative Psychiatric Mental Health Nursing</b>	
NURS 654 Nurse as Therapist	3
NURS 655 Nurse as Leader	2
NURS 656 Integrative Mental Health Nursing: Management and Treatment of Psychopathology for Advanced Practice Nurses	3
NURS 657 Integrative Mental Health Nursing: Contemporary Practice	4
NURS 659 Integrative Mental Health Nursing: Synthesis	4

### Concentration practicum courses

(varies by concentration)

NURS 622 Integrative Psychiatric Mental Health Nursing Practicum I	4
NURS 623 Integrative Psychiatric Mental Health Nursing Practicum II	5
NURS 624 Integrative Psychiatric Mental Health Nursing Practicum III	5

## Nursing administration and leadership

In addition to the core course requirements, the following concentration courses are required.

	credits
<b>Nursing Administration and Leadership</b>	
NURS 505 Advanced Practice Nursing: Computer and Information Technology	1
NURS 655 Nurse as Integrative Leader	2
NURS 680 Leading People	3
NURS 681 Nurses as Organizational Leaders	3
NURS 687 Management Systems and Health Care Outcomes	4
NURS 690 Application of Financial Concepts	4
Accounting elective	3

### Concentration practicum courses

(varies by concentration)

NURS 692 Integrative Administrative Systems Practicum I	3
NURS 693 Integrative Administrative Systems Practicum II	3
NURS 694 Integrative Administrative Systems Practicum III	4

### Computer competency for nursing administration and leadership

Familiarity with basic microcomputer applications, including word processing and spreadsheets, is essential to successful completion of the nursing administration and leadership concentration. Students lacking these skills are strongly urged to develop them prior to enrollment or early in their program of study. While access to the Internet is available on campus, it is generally advantageous for students to have access at home. Basic skills are required prior to enrollment in NURS 505 Advanced Practice Nursing: Computer and Information Technology and NURS 690 Application of Financial Concepts.



## R.N.-M.S. track

The School of Nursing offers a track in the master's program designed for students who have their R.N. licensure but have not completed the baccalaureate degree. The track includes elements of the R.N.-B.S. program and moves the student expeditiously into M.S. program course work. The student completes the general education requirements for the baccalaureate degree prior to entering the R.N.-M.S. track. The track provides the additional courses in the major required for the degree and a B.S. degree is awarded after the completion of 30 credit hours of specified course work. All concentrations in the master's program are available to students admitted to this track.

## Admission requirements

To be considered for admission, applicants must hold the following credentials:

- an associate degree in nursing or a diploma in nursing,
- transcripts reflecting the completion of a community health nursing course comparable to NURS 415,
- acceptable scores on the GRE General Test,
- a current, unrestricted registered nurse license in a U.S. state, the District of Columbia, or a U.S. possession or territory, or an international equivalent,
- passing scores on the Qualifying Exam of the Commission on Graduates of Foreign Nursing Schools (CGFNS) prior to application if a graduate of foreign nursing schools that are licensed outside of the United States (include the exam report with their application materials),
- professional liability insurance (highly recommended).

## Prerequisite courses

The following course will be accepted in transfer, only upon a rigorous evaluation for comparability to the B.S. course using defined criteria developed by expert faculty in community health. Applicants must provide a copy of the course syllabus and a written statement of how the course met the objectives of the VCU course. VCU course objectives will be provided to applicants. Otherwise the course will be taken as a prerequisite for beginning the R.N.-M.S. track:

- NURS 415 Community Health Nursing or comparable course (5 credits)

## General education requirements (taken prior to admission to the R.N.-B.S. track)

	credits
Communications	
Writing or composition	6
Humanities	
Philosophy, ethics, logic or critical thinking	3
Visual or performing art	3

General humanities	6
Social sciences	
Psychology	3-4
Developmental psychology	3
Sociology	3
Mathematics	
Statistics	3
Sciences	
Laboratory sciences	8
Anatomy and physiology	8
Microbiology	4
Nutrition	3
Electives	
Any extra credit from required areas, computer science or other liberal arts courses; no more than three credits in physical education or activity courses may be taken	2-3

**Total general education credits** 56

### Nursing courses

(undergraduate courses taken in the R.N.-B.S. track)	credits
NURS 302 Dynamics of Professional Nursing	4
NURS 370 Nursing Theory and Research	3
NURS 477 Leadership and Management in Health Care	4
NURS 487 Advanced Leadership Practicum	3

### M.S. core curriculum component

(credits shared for B.S. and M.S. degrees)	credits
NURS 501 Advanced Professionalization I	1
NURS 502 Advanced Nursing Practice: Pharmacotherapeutics	3
NURS 503 Advanced Nursing Practice: Psychosocial	3
NURS 504 Advanced Nursing Practice: Biological	3
NURS 508 Advanced Nursing Practice: Systems	3
NURS 509 Advanced Nursing Practice: Community	3
NURS 511 Health Assessment for Advanced Nursing Practice	3
NURS 512 Advanced Nursing Science	3
NURS 601 Advanced Professionalism II	1

**Total master's credits applied to B.S. degree** 23\*

\* Not all of these courses are required in each master's program concentration; however, a student must take at least 17 of these credits to meet the B.S. degree requirements.

The remainder of the curriculum (at least 30 credits) is consistent with all requirements of the current M.S. program and is specific to the concentration chosen.

## Women's health

In addition to the core course requirements, the following concentration courses are required.

	credits
<b>Women's Health Nursing</b>	
NURS 632 Health Promotion in Women	2
NURS 633 Common Health Problems of Women	3
NURS 634 Advanced Practice: The Childbearing Woman	3
NURS 661 Advanced Adult Health II	3
<b>Concentration practicum courses</b> (varies by concentration)	
NURS 682 Women's Practicum I	1-4
NURS 683 Women's Practicum II	1-4
NURS 685 Women's Practicum III	1-5

# School of Pharmacy

The School of Pharmacy was established officially in 1898; the University College of Medicine had a school of pharmacy when it opened in 1893. The two-year curriculum gave way to a three-year program in 1925, and in 1932 the school required four years of college work and a Bachelor of Science degree was awarded. In 1960, the program lengthened to a five-year course leading to a Bachelor of Science in Pharmacy degree. In 1975, authority was granted to offer to selected students a six-year program leading to the Doctor of Pharmacy degree and this program was adopted as the only professional offering by the school in 1995. The School of Pharmacy currently enrolls students in a four-year professional Doctor of Pharmacy program curriculum following completion of at least two years of pre-professional studies taken at VCU or elsewhere. In 1996 a part-time program was offered that permits current Bachelor of Science in Pharmacy degree holders to earn the Doctor of Pharmacy degree in a nontraditional format requiring students to come to campus infrequently. Since 1971, all pharmacy students have participated in a clerkship program. Students spend their final year in a variety of practice settings under the supervision of highly qualified faculty preceptors.

The authority to award graduate degrees in the pharmaceutical sciences was granted by the Graduate Council in 1952. Departments in the school have the responsibility for administering a graduate program leading to the M.S. and Ph.D. in Pharmaceutical Sciences. This program includes areas of specialization in medicinal chemistry, pharmaceuticals, pharmacotherapy and pharmacy administration. These programs provide the preparation and research experience for academic, governmental and industrial careers. Graduate degrees in pharmaceutical sciences do not provide eligibility for licensure as a pharmacist.

Students may elect to pursue a joint Pharm.D./M.S. or Pharm.D./Ph.D. program. Such students must apply to, and be accepted by, both programs separately.

## Administration

410 N. 12th St.  
P.O. Box 980581  
Richmond, VA 23298-0581  
(804) 828-3000  
Fax (804) 828-7436  
<http://www.pharmacy.vcu.edu>

**Victor A. Yanchick**  
Dean

**Jeffrey C. Delafuente**  
Associate Dean for Professional Education

**Gary R. Matzke**  
Associate Dean for Professional Education

**Thomas P. Reinders**  
Associate Dean for Admissions and Student Affairs

**William E. Smith**  
Executive Associate Dean

**Beverly A. Talluto**  
Assistant Dean for Experiential Education

**Andrew L. Wilson**  
Associate Dean for Institutional Program Development

## Accreditation

Pharmacy (Pharm.D.)  
American Council on Pharmaceutical Education

The school is a member of the American Association of Colleges of Pharmacy.

ACPE has an obligation to assure itself that any institution that seeks accreditation status for its professional program conducts its affairs with honesty and frankness. Complaints from other institutions, students, faculty or the public against a school of pharmacy, including tuition and fee policies, and as related to ACPE standards, policies or procedures, shall be placed in writing in detail by the complainant and submitted to ACPE at 20 N. Clark St., Suite 2500, Chicago, IL 60602-5109.

## Statement of purpose

The School of Pharmacy at Virginia Commonwealth University exists to provide exceptional programs benefiting the commonwealth of Virginia and society by offering the highest quality education and training for the development of health care practitioners, scientists, professional leaders and responsible citizens. These individuals are committed to shaping the health care world of tomorrow while serving society's health care needs today.

## Mission statement

The mission of the VCU School of Pharmacy fully supports the mission and goals of the university and the Medical College of Virginia Campus. The school's mission is to provide professional, graduate and postgraduate education, conduct pharmaceutical and biomedical research, and provide patient care and public service.

The school strives to provide an educational environment that encourages the following:

- excellence in scholarship
- excellence in teaching
- diversity and respect among students and faculty
- commitment to the various needs of students
- commitment to service within the school, university, the profession and the community
- quality direct patient care experiences within the curriculum
- commitment to fostering the concept and importance of lifelong learning

Therefore, the school shares with teaching, the interdependent and almost inseparable objectives of research, service and patient care.

## Philosophy

In developing the curriculum of the School of Pharmacy, the faculty recognizes that an educated person should be prepared to assume a responsible and rewarding role in society. The new paradigm of pharmaceutical care guides the school's curriculum committee and faculty in the design and implementation of the curriculum. Pharmaceutical care is the responsible provision of drug therapy by the pharmacist for the purpose of achieving definite outcomes that improve a patient's quality of life. In professional practice pharmaceutical care focuses on the pharmacist's attitudes, behaviors, commitment, concerns, ethics, functions, knowledge, responsibilities and skills in the provision of drug therapy, which achieve outcomes that yield improvement in a patient's quality of life. The educational program is designed to provide a sound, scientific and professional background for both those who will enter the practice of pharmacy directly and those who wish to continue graduate education in the pharmaceutical sciences. It also includes courses in the arts and

humanities in order to provide the student with a broad educational base that will permit participation in community life, not only as a professional, but also as an informed, concerned citizen. The professional curriculum is rigorous and highly demanding of the student's time; employment must not be allowed to interfere with the educational process. The faculty has adopted a document entitled "Expected Competencies of Doctor of Pharmacy Graduates" and has expanded these competencies into knowledge, skills and attitudes that have been implemented in the curriculum.

### **Career opportunities**

Graduation from the School of Pharmacy with a professional degree affords the opportunity to pursue one of several career paths. The most familiar role is as a provider of pharmaceutical care to ambulatory patients in a community setting. In this setting the pharmacist may be self-employed or may be an employee of an organization such as an independent pharmacy, a corporate chain of pharmacies or a managed care pharmacy in a health maintenance organization.

Many pharmacists also practice in institutional settings such as hospitals or other health care institutions.

The pharmaceutical industry also employs pharmacists in several areas including manufacturing, quality control, research, sales and as medical service representatives who call on physicians. Opportunities also are available in various government services, such as public health and veterans affairs, as well as in government-operated laboratories.

In most cases, those who aspire to engage in independent research or to teach seek graduate degrees in the pharmaceutical sciences or in specialty fields related to pharmacy.

### **Facilities**

The School of Pharmacy is located in the Robert Blackwell Smith Building at 12th and East Clay streets. This building — named in honor of a distinguished former dean of pharmacy, former president of the Medical College of Virginia and former provost of the MCV Campus — was completed in 1984 with the help of contributions from many alumni and friends of the School of Pharmacy. Classes for students in pharmacy also are conducted in Sanger Hall, located between 11th and 12th streets on East Marshall Street. In conjunction with the VCU Health System, students receive clinical experience in the VCUHS's MCV Hospitals and clinics. Other facilities available for teaching include area hospitals and pharmacies. The major library holdings are in the Tompkins-McCaw Library at 12th and East Clay streets.

Location in a major health sciences center provides excellent opportunities for interdisciplinary research and access to clinical facilities. The school is well equipped for graduate research and provides leadership to the VCU Institute for Structural Biology and Drug Discovery at the Virginia BioTechnology Research Park. The institute makes use of synthetic medicinal chemistry, X-ray crystallography, NMR, protein and nucleic acid chemistry, bacterial enzymology, and molecular pharmacology to promote drug development. Several businesses have been spawned through the institute and two new drugs have entered clinical trials.

The Department of Pharmacy supports the Center for Drug Studies (CDS), a fully staffed facility for conducting Phase I-III research in humans.

### **Honors and awards for graduate students**

#### **Rho Chi**

This national honorary pharmaceutical society established the Lambda

Chapter at the School of Pharmacy in 1929. Charters for chapters of this organization are granted only to groups in colleges that are members in good standing of the American Association of Colleges of Pharmacy. Election to membership in the society is based on scholarship, character, personality and leadership.

#### **J. Doyle Smith Award**

This award is given to the student in the Department of Medicinal Chemistry who has achieved the greatest distinction in the areas of scholarship, research, teaching and service.

#### **John Wood Award**

This award is presented to the student in the Department of Pharmaceutics who has achieved the greatest distinction in the areas of scholarship, research, teaching and service.

#### **Lowenthal Award**

The Lowenthal Award was created to foster research excellence in genetically based neurological disorders in the VCU School of Pharmacy and is given to a new graduate student doing research in this area.

#### **Jyotsna and Mavji Thakker Award**

This award was established in memory of Dr. Kamlesh Thakker's late parents and recognizes graduate students in pharmaceutics by assisting with educational needs.

#### **Charles T. Rector and Thomas W. Rorrer Jr. Dean's Award**

Established by Mrs. Jacqueline V. Rorrer in memory of her late husband, Charles T. Rector, and in honor of her current husband, Thomas W. Rorrer, this award is presented to the graduate student in the School of Pharmacy who best demonstrates excellence in scholarship, research, teaching and service.

### **Honors and awards for professional degree students**

#### **Rho Chi**

This national honorary pharmaceutical society established the Lambda Chapter at the School of Pharmacy in 1929. Charters for chapters of this organization are granted only to groups in colleges that are members in good standing of the American Association of Colleges of Pharmacy. Election to membership in the society is based on scholarship, character, personality and leadership. Students become eligible for consideration during the second professional year of the pharmacy program.

Lambda Chapter annually awards certificates in recognition of outstanding scholarship to students who have completed the pre-pharmacy and first professional year pharmacy curriculum. Also, Lambda Chapter selects one member of the fourth professional year class who is recognized for excellence in scholarship, leadership, personality and character. The name is inscribed on a plaque displayed in the School of Pharmacy.

#### **Phi Lambda Sigma**

This national pharmacy leadership society established a Beta Nu Chapter at the School of Pharmacy in 2000. Charters for chapters of this organization are granted only to groups in colleges that are members in good standing of the American Association of Colleges of Pharmacy and which are accredited by the American Council of Pharmaceutical Education.

Election to membership in the society is based on the demonstration of dedicated service and leadership in the advancement of pharmacy and evidence of high moral and ethical character.

### **Academic Excellence Award**

This award recognizes excellence in academics.

### **APhA-ASP Professionalism Award**

This award recognizes the ideals of professionalism and excellence in patient care in all aspects of the recipient's academic pharmacy career. The recipient must have demonstrated exceptional service and commitment to the profession through involvement in professional organizations and other extracurricular learning opportunities.

### **ASHP Student Leadership Award**

This award recognizes a student with leadership experience and demonstrated interest in health-system pharmacy practice.

### **Award of Excellence in Clinical Communication**

This award recognizes high academic achievement and outstanding communication skills.

### **Award of Excellence in Nonprescription Medication Studies**

This award recognizes demonstrated academic achievement in the study of nonprescription drug therapy.

### **Clinical Research Award**

This award recognizes a demonstrated contribution to clinical research.

### **Community Practice Achievement Award**

This award recognizes a recipient's demonstrated interest in pursuing a career in community pharmacy.

### **Dean's Award**

This award recognizes a student's outstanding achievement and unselfish devotion to his or her class, the school, the university and the profession.

### **Distinguished Service Award**

This award recognizes a student with demonstrated academic excellence, leadership and a service commitment to the university and greater

community.

### **Excellence in Pharmacy Award**

This award recognizes high academic achievement and professional motivation.

### **Health-System Practice Award**

This award recognizes an individual with a demonstrated commitment to health-system pharmacy practice.

### **Leadership Achievement Award**

This award recognizes an individual with demonstrated leadership qualities.

### **MCV Alumni Association Award**

This award recognizes an individual with demonstrated contributions to alumni activities.

### **Nonprescription Drug Therapy Award**

This award recognizes an individual with demonstrated motivation, knowledge and skill in the domain of nonprescription drug therapy.

### **Outstanding Leadership Award**

This award recognizes an individual with demonstrated qualities and abilities necessary to practice community pharmacy.

### **Patient Care Award**

This award recognizes an individual with the ability to apply clinical knowledge into practical patient care.

### **Pharmacy Communications Award**

This award recognizes an individual with demonstrated effectiveness in pharmacist/patient communication.

### **Phi Lambda Sigma Student Leadership Award**

This award is a peer-recognition award for a member with demonstrated contributions to Phi Lambda Sigma.

### **Research Excellence Award**

This award recognizes excellence in research by a student completing a dual degree.

### **SNAPhA Leadership Award**

This award is a peer recognition award for a member with demonstrated contributions to SNAPhA.

### **Technology Excellence Award**

This award recognizes an individual with demonstrated excellence in the application of technology to enhance the profession.

### **VASP Chapter Award**

This award is a peer-recognition award for a member with demonstrated contributions to VASP.

### **VSHP Excellence in Health-system Pharmacy Award**

This award recognizes an individual with demonstrated excellence in health-system pharmacy practice.

### **Named scholarships for professional degree students**

#### **Henry Addington Academy of Independent Pharmacy Scholarship**

This scholarship is awarded annually to a student who has completed one full year of study in the School of Pharmacy, expresses a formal intention to practice in independent pharmacy upon graduation, has experience working in an independent community pharmacy practice, provides a letter or letters of recommendation from an independent pharmacist and has maintained a satisfactory academic record in the School of Pharmacy. A separate application must be completed, including reference letters.

#### **Lindsay W. and Laura Butler Memorial Scholarship**

This scholarship is awarded annually to a pharmacy student who has demonstrated financial need and academic achievement.

#### **Carolyn Coleman (Stone) Scholarship**

This scholarship is awarded annually to a pharmacy student who has demonstrated financial need and academic achievement.

#### **William S. Cooper Scholarship**

This scholarship is awarded annually to an African-American student who is in the upper half of their class academically and who has a demonstrated financial need.

#### **Sheldon W. Fantle Scholarship**

This scholarship is awarded annually to a pharmacy student who has demonstrated scholastic performance and leadership qualities and is from the cities of Alexandria or Fairfax or the counties of Arlington, Fairfax, Loudon or Prince William.

#### **Russell Fiske Scholarship Fund**

This scholarship is awarded annually to a pharmacy student in financial need who demonstrates service to the community and pharmacy profession and is involved in activities that benefit the school and/or university.

#### **William W. and Patsy Gray Scholarship**

This scholarship is awarded annually to a pharmacy student who has demonstrated scholastic performance and leadership qualities by involvement in professional extracurricular activities.

#### **Linda Nixon Harvey Memorial Scholarship**

This scholarship is presented annually to a rising fourth professional year student who has maintained high academic standards while exhibiting leadership, professional integrity and outstanding personal qualities.

#### **Richard Jacobs Memorial Scholarship**

This scholarship is available annually to a student who has a demonstrated financial need and academic achievement.

#### **David D. Marshall Memorial Scholarship**

This scholarship is presented annually to a married fourth professional year student who ranks academically in the top half of the class and who has demonstrated financial need and academic achievement.

#### **Nick G. Nicholas Memorial Award**

This scholarship is awarded annually to a pharmacy student who has demonstrated financial need and academic achievement.

#### **M. Bruce Rose Scholarship**

This scholarship is presented annually to a student who demonstrates scholastic ability and financial need. Preference shall be given to applicants from the Virginia Pharmacists Association Fourth District (i.e., Petersburg, Dinwiddie, Chester, Hopewell area).

#### **Samuel and Gilbert Rosenthal Foundation Scholarship**

This scholarship is awarded annually to a pharmacy student who has demonstrated financial need, academic achievement and a commitment to service.

#### **W. Roy Smith Memorial Scholarship**

This scholarship is awarded annually to a senior pharmacy student demonstrating academic talent, strong leadership ability and involvement in community activities. A separate application must be completed, including reference letters.

#### **Glenn B. Updike Sr. Scholarship**

This scholarship is available to a student who demonstrates scholastic

ability and has financial need. Preference shall be given to applicants who are from the Danville, Va. area.

### **Warren E. Weaver Scholarship**

This scholarship is awarded annually to a student who is determined to be outstanding in character, leadership and academic performance.

### **C. Eugene White Scholarship**

This scholarship is awarded annually to a senior pharmacy student in financial need who demonstrates service to the community and pharmacy profession and is involved in activities that benefit the school and/or university.

### **Edward E. Willey Pharmacy Scholarship Award for Outstanding Scholarship and Leadership**

This scholarship is presented annually to a rising fourth professional year student who is determined to be outstanding in character, as judged by faculty and classmates; leadership ability, as demonstrated by participation in and leadership of student organizations; and academic performance, as demonstrated by the attainment of a 3.75 grade-point average during the first three years in pharmacy school. A separate application must be completed, including reference letters.

### **Organizations for graduate students**

#### **Student chapter of the International Society for Pharmacoeconomics and Outcomes Research**

This organization fosters interest among professional and graduate students in pharmacoeconomics and health outcomes assessment.

#### **AAPS Virginia Commonwealth University Chapter**

The AAPS-Virginia Commonwealth University Student Chapter was established in April 2004. Since its start, student membership has grown tremendously, with the chapter attracting students from various biological and related health fields. The chapters mission is to provide an educational outreach program for VCU students with an interest in the pharmaceutical sciences.

### **Organizations for professional degree students**

#### **Virginia Academy of Students of Pharmacy**

Students in the School of Pharmacy have an opportunity to become members of this organization that is affiliated with the Virginia Pharmacists Association and the American Pharmaceutical Association. The group meets regularly presenting programs of interest to the student body.

#### **Student Chapter Virginia Society of Health-System Pharmacists**

Pharmacy students who are interested in the practice of pharmacy in organized health care settings may become members.

### **Student National Pharmaceutical Association**

This student subdivision of the National Pharmaceutical Association works to define the future role of minority health professionals in the community.

### **Student Association of Community Pharmacists**

This student organization focuses on issues of interest to students who plan to pursue careers in community pharmacy. It is affiliated with the National Community Pharmacists Association.

### **Student Chapter of the Academy of Managed Care Pharmacists**

This student organization serves the interests of students who plan to pursue a career in the managed care practice environment.

### **Student Chapter of the International Society for Pharmacoeconomics and Outcomes Research**

This organization fosters interest among professional and graduate students in pharmacoeconomics and health outcomes assessment.

### **Fraternities for professional degree students**

Chapters of Kappa Epsilon, Kappa Psi, and Phi Delta Chi are active within the student body. These fraternities extend invitations, according to the rules of the Interfraternity Council, to pharmacy students to become members. Eligibility for consideration is based upon academic achievement as determined by the Interfraternity Council and the dean's office.

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## **Pharmaceutical Sciences, Doctor of Philosophy (Ph.D.)**

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### **Admission requirements summary**

#### **Pharmaceutical Sciences, Doctor of Philosophy (Ph.D.)**

Indicate specialization:

The school offers programs of graduate study leading to the degree of Doctor of Philosophy. Students may specialize in pharmaceuticals, medicinal chemistry, pharmacotherapy or pharmacy administration.

### **Academic regulations**

#### **Registration**

While most students register for the first semester beginning in August, arrangements may be made to initiate graduate work at other times during the academic year.

#### **Financial assistance**



Graduate students in the pharmaceutical sciences may receive support via teaching assistantships, research assistantships or fellowships. The American Foundation for Pharmaceutical Education provides support to eligible applicants for graduate study in the pharmaceutical sciences. Students pursuing the master's degree will not be supported by university teaching assistantships.

### The student's adviser and the advisory committee

The departmental graduate program will advise students until a permanent adviser has been chosen. During their first semester, new graduate students are required to arrange interviews with each graduate faculty member of their major department to discuss research projects. The selection of an adviser and a research project are made in accordance with the rules and procedures of the student's department. The adviser will arrange for the appointment of the student's advisory committee. The responsibilities of the adviser and the advisory committee are described in the School of Pharmacy section of this bulletin.

### Requirements for graduate degrees

Graduate students in the pharmaceutical sciences must satisfy the graduate degree requirements described in the School of Pharmacy section of this bulletin. In some cases, more stringent requirements are imposed. These are described in detail in departmental graduate student/rule handbooks, which are issued to all students.

All graduate students are required to attend seminars in their own discipline and are encouraged to attend seminars of interest in other departments. Students are required to present seminars satisfactory to the faculty.

Graduate students are expected to devote maximum effort to the pursuit of their education. During normal working hours, graduate students are expected to be working on their research projects when they are not in class. Graduate students who are progressing satisfactorily may be granted permission to take outside employment during evenings or weekends.

### Graduate program admission requirements

General requirements pertaining to the graduate program in pharmaceutical sciences follow the same guidelines for graduate studies at VCU.

Admission to the graduate program in pharmaceutical sciences is open to students having a Doctor of Pharmacy degree, or bachelor's degree in pharmacy, chemistry, biochemistry, biology, premed, engineering or a related science. Exceptions to this statement may apply to students enrolled in the Pharm.D. curriculum who wish to apply for the combined Pharm.D. and Ph.D. degree. Acceptance is based upon undergraduate performance, satisfactory scores on the Graduate Record Examination (GRE), letters of recommendation and, where applicable, TOEFL scores. The current requirement for the GRE exam is that all applicants take the General Test containing the Mathematical Reasoning portion.

Application forms and instructions for applying to all graduate programs are available on the Graduate School Web site at <http://www.vcu.edu/graduate>.

### Graduate curriculum

### Pharmaceutical sciences core

The following courses or course areas are required of all graduate students enrolled in the pharmaceutical sciences graduate program prior to graduation. Courses and course areas that are similar to those listed and have been taken prior to entry in the program may satisfy the requirement and courses other than those listed may be substituted. The appropriate graduate program director and department chair must approve acceptance of courses and course areas that are not on the following list.

1. PCEU/MEDC 607-608 Introduction to Pharmaceutical Sciences
2. MICR 512 Laboratory Safety (pharmacy administration graduate students are not required to take this course)
3. Ethics (MICR 510)
4. Seminar (MEDC 690, PCEU 690, PHAR 690)
5. Directed research (MEDC 697, PCEU 697, PHAR 697)

### Medicinal chemistry specialization

### Admission requirements summary

#### Medicinal chemistry specialization

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall preferred	Jun 1 (Submission of application by Dec 1 highly recommended)	GRE

#### Special requirements:

International applicants must complete the TOEFL and international admissions application.

Medicinal chemistry, an amalgamation of chemistry and the life sciences, is a multidisciplinary field that applies chemical (i.e., synthetic, analytical, theoretical and/or physical chemistry) principles to investigations of biologically active substances that include therapeutically useful drugs, natural products, toxins and drugs of abuse. Investigations may be focused on identification of biological mechanisms of action, rational drug design and synthesis, metabolism studies, identification of pharmacological tools, or the development of techniques necessary to perform such studies. The discipline requires an understanding of both the chemical and biological processes involved; thus, in addition to a solid background in chemistry, the medicinal chemist is required to be versed in biological sciences such as biochemistry, pharmacology, toxicology, molecular biology, enzyme mechanisms, receptor theory and/or neurochemistry, depending upon the student's interests.

In addition to research, the curriculum consists of two general components: core courses and elective courses. All doctoral students are required to take core courses that include: medicinal chemistry (MEDC 591 and 601), advanced medicinal chemistry (MEDC 610 or 620), research techniques (MEDC 526), seminar (MEDC 690), biochemistry (BIOC 503 or 504), pharmacology (PHTX 691), advanced organic chemistry (CHEM 604) and molecular modeling (MEDC 641). Specific courses may be recommended on the basis of the result of placement exams administered during the first week of enrollment. Doctoral students also are required to present two non-thesis seminars and a final seminar on their research. Depending upon their interests, and in consultation with their chosen dissertation adviser, students select from a variety of elective courses such that their graduate program can be specifically tailored to their future research or career goals. Doctoral students are required to pass a series of cumulative examinations in order to become eligible to take an oral comprehensive

examination based on an original (i.e., non-thesis) research proposal. Most graduate students begin their research during their first year and are encouraged to present the results of their research in oral and poster format at various local, state and other scientific meetings. Most advanced graduate students also participate in laboratory and classroom teaching, and some as tutors, to enhance their teaching proficiency and presentation technique. Well-prepared students, depending upon the nature of their research, should be able to complete all degree requirements in less than two and a half years for a master's degree or within about four and a half years for a doctoral degree.

Research resources include state-of-the-art molecular modeling facilities, synthetic organic chemistry laboratories, X-ray crystallographic equipment and access to high-field nuclear magnetic resonance spectrometers. The department's research interests are closely interwoven with the VCU Institute for Structural Biology and Drug Development, which is housed on the campus and to which many departmental faculty belong.

At present, the research interests of the department include synthesis and biological evaluation of new compounds; molecular-graphics assisted drug design; determination of relationships between chemical structure and biological activity; studies of drug action; receptor binding studies; theoretical studies on structure-activity relationships of drugs, including the use of molecular orbital theory, X-ray crystallography, computational chemistry and molecular connectivity; and rational design of new drugs and studies on drug metabolism.

## Pharmaceutics specialization

### Admission requirements summary

#### Pharmaceutics specialization

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall preferred	Jun 1 (Submission of application by Dec 1 highly recommended)	GRE

#### Special requirements:

International applicants must complete the TOEFL and international admissions application.

Pharmaceutics can be classically defined as the profession concerned with the art and science of formulating medicines into vehicles (tablets, suspensions, aerosols, etc.) that are optimal for the prevention and treatment of disease. This field has become multidisciplinary with increasing knowledge of the variety of factors involved. The study of the time-course disposition of drugs to a host biologic system has emerged as the discipline of pharmacokinetics and is often studied in close conjunction with the related discipline of pharmacodynamics, in which the time course of drug effects is studied.

Biopharmaceutics entails the study of the means and mechanisms by which drugs enter biological systems, while drug metabolism involves study of the rate and specificity of enzymatic chemical conversion of drugs. The sciences of pharmaceutical and biopharmaceutical analysis are concerned with the investigation of chemical and instrumental systems for qualitative and quantitative measurement of drugs. All of these related disciplines can collectively be referred to as modern pharmaceutics, which requires a knowledge and interest in mathematics, chemistry, biological sciences and physical sciences.

The curriculum includes core course requirements in statistics, biopharmaceutics, drug metabolism, pharmacokinetics, physical pharmacy, pharmaceutical analysis and seminars in drug development. Depending on the student's interests and major adviser, prerequisites in mathematics, chemistry and pharmacology also may be required. In

addition to the core course work, a variety of elective courses are available including biotechnology, advanced courses in pharmacokinetics and pharmaceutical analysis, chemical separations, physiology, spectroscopy, biochemistry, immunology and many others that may be selected in consultation with the student's major adviser. Doctoral students take written and oral comprehensive examinations after completion of their required course work. The highlight of graduate study is conducting the research project. This project involves laboratory or clinical research, and completion is indicated by successful defense of the project.

Funding for research includes both federal and industrial sponsorship and provides a number of resources that are similar to industrial standards. A cell culture and microscopy lab, an aerosol research facility, a 72-bed clinic and a biopharmaceutical analysis laboratory are among the many resources available to students. A state-of-the-art computer laboratory is available and a temporary animal housing facility also is present in the building. Examples of research equipment available to students include: laser light scattering, laser-induced fluorescence, scintillation and gamma counters, atomic spectroscopy, chromatography, mass spectrometry, brain mapping, and differential scanning calorimetry.

## Pharmacotherapy and pharmacy administration specializations

### Admission requirements summary

#### Pharmacotherapy and pharmacy administration specializations

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall preferred	Jun 1 (Submission of application by Dec 1 highly recommended)	GRE

#### Special requirements:

International applicants must complete the TOEFL and international admissions application.

The Department of Pharmacy offers two areas of specialization: Pharmacotherapy (the safe and effective use of drugs in humans) and Pharmacy Administration (the evaluation of the social and economic impact of drug therapy in humans and in health care systems). Upon admission, graduate students will generally choose one of these two areas of emphasis to study.

Students in Pharmacotherapy usually will elect to study in the areas of gerontology (the study of the aging process), clinical trials and drug development, pharmacogenomics (the study of genetic variability in drug development and prescribing), infectious disease, or mental health.

Students in Pharmacy Administration may elect to study pharmacoeconomics (the study of the costs and consequences of the use of pharmaceuticals), pharmacoepidemiology (the study of the utilization and effects of drugs in large numbers of people), or pharmaceutical marketing.

Graduate students also may take suitable courses outside of the department in areas of statistics, clinical trials research, health care administration, pharmacology, economics, computer sciences, public health, public policy, marketing and epidemiology. The selection and scope of the external course work will depend on student needs and research interests.

Currently, research interest in the faculty include nephrology and dialysis, geriatric pharmacokinetics, pharmacoepidemiology, pharmacoeconomics, drug prescribing, gerontology, health education, infectious disease, critical care, cardiology, pharmaceutical marketing, geriatrics, pharmacogenomics, womens health, rheumatology, and critical care.

Resources available to student include the VCU Health System, the Center for Drug Studies, several large medical databases and the university.

## Pharmaceutical Sciences, Master of (M.P.S.)

### Admission requirements summary

#### Pharmaceutical Sciences, Master of (M.P.S.)

Indicate specialization

The Master of Pharmaceutical Sciences (M.P.S.) is a professional masters degree designed for those students who may not need or desire the laboratory or clinical research portion of the traditional Master of Science in Pharmaceutical Sciences degree. The program normally requires two years to complete. Students may focus on any of the various areas of specialization within the School of Pharmacy that are offered to M.S. students.

Admission, course requirements and other procedures are as described for the M.S. in Pharmaceutical Sciences, with the difference between the programs being the form of the final project. The M.P.S. replaces the traditional clinically or laboratory-based research project with a capstone literature-based review. This capstone literature requirement will consist of a review of current literature in a specialty area that is chosen in conjunction with the students adviser and followed by completion of a literature review manuscript suitable for publication.

### Medicinal chemistry specialization

### Admission requirements summary

#### Medicinal chemistry specialization

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S. or M.P.S.	Fall preferred	Jun 1 (Submission of application by Dec 1 highly recommended)	GRE

#### Special requirements:

International applicants must complete the TOEFL and international admissions application.

Medicinal chemistry, an amalgamation of chemistry and the life sciences, is a multidisciplinary field that applies chemical (i.e., synthetic, analytical, theoretical and/or physical chemistry) principles to investigations of biologically active substances that include therapeutically useful drugs, natural products, toxins and drugs of abuse. Investigations may be focused on identification of biological mechanisms of action, rational drug design and synthesis, metabolism studies, identification of pharmacological tools, or the development of techniques necessary to perform such studies. The discipline requires an understanding of both the chemical and biological processes involved; thus, in addition to a solid background in chemistry, the medicinal chemist is required to be versed in biological sciences such as biochemistry, pharmacology, toxicology, molecular biology, enzyme mechanisms, receptor theory and/or neurochemistry, depending upon the student's interests.

In addition to research, the curriculum consists of two general components: core courses and elective courses. All master's students are required to take core courses that include: medicinal chemistry (MEDC 591 and 601), advanced medicinal chemistry (MEDC 610 or 620), research techniques (MEDC 526), seminar (MEDC 690), biochemistry (BIOC 503 or 504), pharmacology (PHTX 691), advanced organic chemistry (CHEM 604) and

molecular modeling (MEDC 641). Specific courses may be recommended on the basis of the result of placement exams administered during the first week of enrollment. Master's candidates also are required to present one non-thesis seminar and a final seminar on their research. Depending upon their interests, and in consultation with their chosen dissertation adviser, students select from a variety of elective courses such that their graduate program can be specifically tailored to their future research or career goals. Most graduate students begin their research during their first year and are encouraged to present the results of their research in oral and poster format at various local, state and other scientific meetings. Most advanced graduate students also participate in laboratory and classroom teaching, and some as tutors, to enhance their teaching proficiency and presentation technique. Well-prepared students, depending upon the nature of their research, should be able to complete all master's degree requirements within approximately two and a half years.

Research resources include state-of-the-art molecular modeling facilities, synthetic organic chemistry laboratories, X-ray crystallographic equipment and access to high-field nuclear magnetic resonance spectrometers. The department's research interests are closely interwoven with the VCU Institute for Structural Biology and Drug Development, which is housed on the campus and to which many departmental faculty belong.

At present, the research interests of the department include synthesis and biological evaluation of new compounds; molecular-graphics assisted drug design; determination of relationships between chemical structure and biological activity; studies of drug action; receptor binding studies; theoretical studies on structure-activity relationships of drugs, including the use of molecular orbital theory, X-ray crystallography, computational chemistry and molecular connectivity; and rational design of new drugs and studies on drug metabolism.

### Pharmaceutics specialization

### Admission requirements summary

#### Pharmaceutics specialization

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S. or M.P.S.	Fall preferred	Jun 1 (Submission of application by Dec 1 highly recommended)	GRE

#### Special requirements:

International applicants must complete the TOEFL and international admissions application.

Pharmaceutics can be classically defined as the profession concerned with the art and science of formulating medicines into vehicles (tablets, suspensions, aerosols, etc.) that are optimal for the prevention and treatment of disease. This field has become multidisciplinary with increasing knowledge of the variety of factors involved. The study of the time-course disposition of drugs to a host biologic system has emerged as the discipline of pharmacokinetics and is often studied in close conjunction with the related discipline of pharmacodynamics, in which the time course of drug effects is studied.

Biopharmaceutics entails the study of the means and mechanisms by which drugs enter biological systems, while drug metabolism involves study of the rate and specificity of enzymatic chemical conversion of drugs. The sciences of pharmaceutical and biopharmaceutical analysis are concerned with the investigation of chemical and instrumental systems for qualitative and quantitative measurement of drugs. All of these related disciplines can collectively be referred to as modern pharmaceutics, which requires a knowledge and interest in mathematics, chemistry, biological sciences and physical sciences.

The curriculum includes core course requirements in statistics, biopharmaceutics, drug metabolism, pharmacokinetics, physical pharmacy, pharmaceutical analysis and seminars in drug development. Depending on the student's interests and major adviser, prerequisites in mathematics, chemistry and pharmacology also may be required. In addition to the core course work, a variety of elective courses are available including biotechnology, advanced courses in pharmacokinetics and pharmaceutical analysis, chemical separations, physiology, spectroscopy, biochemistry, immunology and many others that may be selected in consultation with the student's major adviser. The highlight of graduate study is conducting the research project. This project involves laboratory or clinical research, and completion is indicated by successful defense of the project.

Funding for research includes both federal and industrial sponsorship and provides a number of resources that are similar to industrial standards. A cell culture and microscopy lab, an aerosol research facility, a 72-bed clinic and a biopharmaceutical analysis laboratory are among the many resources available to students. A state-of-the-art computer laboratory is available and a temporary animal housing facility also is present in the building. Examples of research equipment available to students include: laser light scattering, laser-induced fluorescence, scintillation and gamma counters, atomic spectroscopy, chromatography, brain mapping, and differential scanning calorimetry.

## Pharmacotherapy or pharmacy administration specializations

### Admission requirements summary

#### Pharmacotherapy or pharmacy administration specializations

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S. or M.P.S.	Fall preferred	Jun 1 (Submission of application by Dec 1 highly recommended)	GRE

#### Special requirements:

International applicants must complete the TOEFL and international admissions application.

The Department of Pharmacy offers two areas of specialization: pharmacotherapy (the safe and effective use of drugs in humans) and pharmacy administration (the evaluation of the social and economic impact of drug therapy in humans and in health care systems). Upon admission, graduate students will generally choose one of these two areas of emphasis to study.

Students in pharmacotherapy usually will elect to study in the areas of gerontology (the study of the aging process), clinical trials and drug development, pharmacogenomics (the study of genetic variability in drug development and prescribing), infectious disease, or mental health.

Students in pharmacy administration may elect to study pharmacoeconomics (the study of the costs and consequences of the use of pharmaceuticals), pharmacoepidemiology (the study of the utilization and effects of drugs in large numbers of people), or pharmaceutical marketing.

Graduate students also may take suitable courses outside of the department in areas of statistics, clinical trials research, health care administration, pharmacology, economics, computer sciences, public health, public policy, marketing and epidemiology. The selection and scope of the external course work will depend on student needs and research interests.

Currently, research interest in the faculty include nephrology and dialysis,

geriatric pharmacokinetics, pharmacoepidemiology, pharmacoeconomics, drug prescribing, gerontology, health education, infectious disease, critical care, cardiology, pharmaceutical marketing, geriatrics, pharmacogenomics, womens health, rheumatology, and critical care. Resources available to student include the VCU Health System, the Center for Drug Studies, several large medical databases and the university.

## Pharmaceutical Sciences, Master of Science (M.S.)

### Admission requirements summary

#### Pharmaceutical Sciences, Master of Science (M.S.)

Indicate specialization

The school offers programs of graduate study leading to the degree of Master of Science. Students may specialize in pharmaceuticals, medicinal chemistry, pharmacotherapy or pharmacy administration.

### Academic regulations

#### Registration

While most students register for the first semester beginning in August, arrangements may be made to initiate graduate work at other times during the academic year.

#### Financial assistance

Graduate students in the pharmaceutical sciences may receive support via teaching assistantships, research assistantships or fellowships. The American Foundation for Pharmaceutical Education provides support to eligible applicants for graduate study in the pharmaceutical sciences. Students pursuing the master's degree will not be supported by university teaching assistantships.

#### The student's adviser and the advisory committee

The departmental graduate program will advise students until a permanent adviser has been chosen. During their first semester, new graduate students are required to arrange interviews with each graduate faculty member of their major department to discuss research projects. The selection of an adviser and a research project are made in accordance with the rules and procedures of the student's department. The adviser will arrange for the appointment of the student's advisory committee. The responsibilities of the adviser and the advisory committee are described in the School of Pharmacy section of this bulletin.

#### Requirements for graduate degrees

Graduate students in the pharmaceutical sciences must satisfy the graduate degree requirements described in the School of Pharmacy section of this bulletin. In some cases, more stringent requirements are imposed. These are described in detail in departmental graduate student/rule handbooks, which are issued to all students.

All graduate students are required to attend seminars in their own discipline and are encouraged to attend seminars of interest in other

departments. Students are required to present seminars satisfactory to the faculty.

Graduate students are expected to devote maximum effort to the pursuit of their education. During normal working hours, graduate students are expected to be working on their research projects when they are not in class. Graduate students who are progressing satisfactorily may be granted permission to take outside employment during evenings or weekends.

### Graduate program admission requirements

General requirements pertaining to the graduate program in pharmaceutical sciences follow the same guidelines for graduate studies at VCU.

Admission to the graduate program in pharmaceutical sciences is open to students having a Doctor of Pharmacy degree, or bachelor's degree in pharmacy, chemistry, biochemistry, biology, premed, engineering or a related science. Exceptions to this statement may apply to students enrolled in the Pharm.D. curriculum who wish to apply for the combined Pharm.D. and Ph.D. degrees. Acceptance is based upon undergraduate performance, satisfactory scores on the Graduate Record Examination (GRE), letters of recommendation and, where applicable, TOEFL scores. The current requirement for the GRE exam is that all applicants take the General Test containing the Mathematical Reasoning portion.

Application forms and instructions for applying to all graduate programs are available on the Graduate School Web site at <http://www.vcu.edu/graduate>.

### Core curriculum

The following courses or course areas are required of all graduate students enrolled in the pharmaceutical sciences graduate program prior to graduation. Courses and course areas that are similar to those listed and have been taken prior to entry in the program may satisfy the requirement and courses other than those listed may be substituted. The appropriate graduate program director and department chair must approve acceptance of courses and course areas that are not on the following list.

1. PCEU/MEDC 607-608 Introduction to Pharmaceutical Sciences
2. MICR 512 Laboratory Safety (pharmacy administration graduate students are not required to take this course)
3. Ethics (MICR 510)
4. Seminar (MEDC 690, PCEU 690, PHAR 690)
5. Directed research (MEDC 697, PCEU 697, PHAR 697)

### Medicinal chemistry specialization

#### Admission requirements summary

##### Medicinal chemistry specialization

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S. or M.P.S.	Fall preferred	Jun 1 (Submission of application by Dec 1 highly recommended)	GRE

##### Special requirements:

International applicants must complete the TOEFL and international admissions application.

Medicinal chemistry, an amalgamation of chemistry and the life sciences, is a multidisciplinary field that applies chemical (i.e., synthetic, analytical, theoretical and/or physical chemistry) principles to investigations of biologically active substances that include therapeutically useful drugs, natural products, toxins and drugs of abuse. Investigations may be focused on identification of biological mechanisms of action, rational drug design and synthesis, metabolism studies, identification of pharmacological tools, or the development of techniques necessary to perform such studies. The discipline requires an understanding of both the chemical and biological processes involved; thus, in addition to a solid background in chemistry, the medicinal chemist is required to be versed in biological sciences such as biochemistry, pharmacology, toxicology, molecular biology, enzyme mechanisms, receptor theory and/or neurochemistry, depending upon the student's interests.

In addition to research, the curriculum consists of two general components: core courses and elective courses. All master's students are required to take core courses that include: medicinal chemistry (MEDC 591 and 601), advanced medicinal chemistry (MEDC 610 or 620), research techniques (MEDC 526), seminar (MEDC 690), biochemistry (BIOC 503 or 504), pharmacology (PHTX 691), advanced organic chemistry (CHEM 604) and molecular modeling (MEDC 641). Specific courses may be recommended on the basis of the result of placement exams administered during the first week of enrollment. Master's candidates also are required to present one non-thesis seminar and a final seminar on their research. Depending upon their interests, and in consultation with their chosen dissertation adviser, students select from a variety of elective courses such that their graduate program can be specifically tailored to their future research or career goals. Most graduate students begin their research during their first year and are encouraged to present the results of their research in oral and poster format at various local, state and other scientific meetings. Most advanced graduate students also participate in laboratory and classroom teaching, and some as tutors, to enhance their teaching proficiency and presentation technique. Well-prepared students, depending upon the nature of their research, should be able to complete all master's degree requirements within approximately two and a half years.

Research resources include state-of-the-art molecular modeling facilities, synthetic organic chemistry laboratories, X-ray crystallographic equipment and access to high-field nuclear magnetic resonance spectrometers. The department's research interests are closely interwoven with the VCU Institute for Structural Biology and Drug Development, which is housed on the campus and to which many departmental faculty belong.

At present, the research interests of the department include synthesis and biological evaluation of new compounds; molecular-graphics assisted drug design; determination of relationships between chemical structure and biological activity; studies of drug action; receptor binding studies; theoretical studies on structure-activity relationships of drugs, including the use of molecular orbital theory, X-ray crystallography, computational chemistry and molecular connectivity; and rational design of new drugs and studies on drug metabolism.

### Pharmaceutics specialization

#### Admission requirements summary

##### Pharmaceutics specialization

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S. or M.P.S.	Fall preferred	Jun 1 (Submission of application by Dec 1 highly recommended)	GRE

##### Special requirements:

International applicants must complete the TOEFL and international admissions application.

Pharmaceutics can be classically defined as the profession concerned with the art and science of formulating medicines into vehicles (tablets, suspensions, aerosols, etc.) that are optimal for the prevention and treatment of disease. This field has become multidisciplinary with increasing knowledge of the variety of factors involved. The study of the time-course disposition of drugs to a host biologic system has emerged as the discipline of pharmacokinetics and is often studied in close conjunction with the related discipline of pharmacodynamics, in which the time course of drug effects is studied.

Biopharmaceutics entails the study of the means and mechanisms by which drugs enter biological systems, while drug metabolism involves study of the rate and specificity of enzymatic chemical conversion of drugs. The sciences of pharmaceutical and biopharmaceutical analysis are concerned with the investigation of chemical and instrumental systems for qualitative and quantitative measurement of drugs. All of these related disciplines can collectively be referred to as modern pharmaceutics, which requires a knowledge and interest in mathematics, chemistry, biological sciences and physical sciences.

The curriculum includes core course requirements in statistics, biopharmaceutics, drug metabolism, pharmacokinetics, physical pharmacy, pharmaceutical analysis and seminars in drug development. Depending on the student's interests and major adviser, prerequisites in mathematics, chemistry and pharmacology also may be required. In addition to the core course work, a variety of elective courses are available including biotechnology, advanced courses in pharmacokinetics and pharmaceutical analysis, chemical separations, physiology, spectroscopy, biochemistry, immunology and many others that may be selected in consultation with the student's major adviser. The highlight of graduate study is conducting the research project. This project involves laboratory or clinical research, and completion is indicated by successful defense of the project.

Funding for research includes both federal and industrial sponsorship and provides a number of resources that are similar to industrial standards. A cell culture and microscopy lab, an aerosol research facility, a 72-bed clinic and a biopharmaceutical analysis laboratory are among the many resources available to students. A state-of-the-art computer laboratory is available and a temporary animal housing facility also is present in the building. Examples of research equipment available to students include: laser light scattering, laser-induced fluorescence, scintillation and gamma counters, atomic spectroscopy, chromatography, brain mapping, and differential scanning calorimetry.

## Pharmacotherapy or pharmacy administration specializations

### Admission requirements summary

#### Pharmacotherapy or pharmacy administration specializations

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S. or M.P.S.	Fall preferred	Jun 1 (Submission of application by Dec 1 highly recommended)	GRE

#### Special requirements:

International applicants must complete the TOEFL and international admissions application.

The Department of Pharmacy offers two areas of specialization: pharmacotherapy (the safe and effective use of drugs in humans) and pharmacy administration (the evaluation of the social and economic impact of drug therapy in humans and in health care systems). Upon admission, graduate students will generally choose one of these two areas of emphasis to study.

Students in pharmacotherapy usually will elect to study in the areas of gerontology (the study of the aging process), clinical trials and drug development, pharmacogenomics (the study of genetic variability in drug development and prescribing), infectious disease, or mental health.

Students in pharmacy administration may elect to study pharmacoeconomics (the study of the costs and consequences of the use of pharmaceuticals), pharmacoepidemiology (the study of the utilization and effects of drugs in large numbers of people), or pharmaceutical marketing.

Graduate students also may take suitable courses outside of the department in areas of statistics, clinical trials research, health care administration, pharmacology, economics, computer sciences, public health, public policy, marketing and epidemiology. The selection and scope of the external course work will depend on student needs and research interests.

Currently, research interest in the faculty include nephrology and dialysis, geriatric pharmacokinetics, pharmacoepidemiology, pharmacoeconomics, drug prescribing, gerontology, health education, infectious disease, critical care, cardiology, pharmaceutical marketing, geriatrics, pharmacogenomics, women's health, rheumatology, and critical care. Resources available to student include the VCU Health System, the Center for Drug Studies, several large medical databases and the university.

## Pharmacy, Doctor of (Pharm.D.)

The school offers the Doctor of Pharmacy degree through two program pathways. Students who do not have a Bachelor of Science in Pharmacy enroll in the first professional program that is completed in four years of full-time study at the school following completion of the two-year minimum pre-pharmacy requirements. Students holding the Bachelor of Science in Pharmacy degree who wish to upgrade their professional skills and degree enroll in a nontraditional program that can be completed through part-time study.

### Accreditation

The Doctor of Pharmacy (Pharm.D.) is fully accredited by the Accreditation Council for Pharmacy Education.

The school is a member of the American Association of Colleges of Pharmacy.

ACPE has an obligation to assure itself that any institution that seeks accreditation status for its professional program conducts its affairs with honesty and frankness. Complaints from other institutions, students, faculty or the public against a school of pharmacy, including tuition and fee policies, and as related to ACPE standards, policies or procedures, shall be placed in writing in detail by the complainant and submitted to ACPE at 20 N. Clark St., Suite 2500, Chicago, IL 60602-5109.

### Licensing and reciprocity

The Virginia Board of Pharmacy holds qualifying examinations for licensure on an ongoing basis throughout the year. Applicants for the examination must present evidence that their first professional degree was granted by a school of pharmacy recognized by the board. This school is among those recognized. Applicants must also present evidence of completion of 1,500 hours of practical experience. Completion of the school's Pharm.D. program satisfies 1,200 hours of this requirement.

Those students who intend to be licensed in Virginia should contact the Virginia Board of Pharmacy, 6603 W. Broad St., 5th Floor, Richmond, VA 23230-1712.



Virginia has reciprocal licensing agreements with all states except California and Florida.

## Admission requirements

Applicants for admission to the School of Pharmacy must attend an accredited college for at least two academic years (six quarters or four semesters) and complete the specified course requirements prior to admission.

Students planning to seek a degree in pharmacy upon high school graduation should plan their high school program to meet the requirements for admission in the college where they will take the prerequisite work for admission into the VCU School of Pharmacy.

The minimal admission requirements are listed. (Meeting these requirements does not, however, guarantee acceptance into the VCU School of Pharmacy.)

1. A statement affirming the applicant's good moral character signed by one or more pharmacists, physicians or former teachers may be requested by the Admissions Committee.
2. An official transcript from the student's primary college and all colleges attended must be supplied. Applications are considered by the Admissions Committee only after transcripts on file show completion of no less than two semesters or three quarters of college work. When offered, an acceptance is contingent upon satisfactory completion of specific work that may be in progress.
3. Applicants must present the required credits in the following subject areas for a total of at least 68 semester-hours (102 quarter-hours).

	Semester Hours	Quarter Hours
Biology (lecture and laboratory)	8.0	12.0
General chemistry (lecture and laboratory)	8.0	12.0
Organic chemistry (lecture and laboratory)	8.0	12.0
Physics (lecture and laboratory)	8.0	12.0
English	6.0	9.0
Mathematics (at least 3 semester-hours or 4.5 quarter-hours must be calculus)	6.0	9.0
Statistics	3.0	4.5
Public speaking	3.0	4.5
Electives	18.0	27.0
	<hr/> 68.0	<hr/> 102.0

Credits earned through Advanced Placement Tests of the College Board or International Baccalaureate are not acceptable in meeting the total 68 semester-hours requirement. Such AP credits may excuse a student from taking a specific non-science course such as English, but the credits must be made up through additional electives. AP credits in science (e.g., biology, chemistry) or mathematics (e.g., calculus) must be made up with courses in kind. Generally, this requirement is achieved by taking advanced-level courses (e.g., physical chemistry as a substitute for AP/IB credit in general chemistry).

Dual-credit courses taken during high school may be considered acceptable for transfer credit pending review of college transcripts.

All elective credits must be in liberal arts or behavioral sciences (natural sciences, physical education or studio course credits are not accepted).

Credits earned in gross human anatomy, biochemistry, microbiology or physiology are part of the curriculum of the School of Pharmacy and therefore are not acceptable in meeting the prerequisites.

In unusual cases, students may be admitted subject to completion of course credit prior to graduation.

4. Applicants must have earned a creditable average ("C" or better) overall, and in the courses specified, to meet minimum academic requirements for admission.
5. Applicants for admission must apply online through PharmCAS, a centralized application service for pharmacy schools. The PharmCAS Web site at <http://www.pharmcas.org> provides further details.
6. The dean and the committee on admissions may require a personal interview with the applicant.
7. Applicants are required to take the Pharmacy College Admission Test (PCAT) before admission.
8. Applicants whose first language is not English should submit scores from the Test of English as a Foreign Language, the Test of Spoken English or other proof that their command of English is sufficient to allow successful completion of all requirements of the program.
9. Students are admitted only at the start of the academic year. An applicant must complete one full year of the academic prerequisites before an application can be reviewed. The Admissions Committee begins reviewing applications during September of the year preceding admission. It is to the applicant's advantage to apply during the fall of the year before expected enrollment in the School of Pharmacy. Applicants are accepted pending satisfactory completion of all prerequisite courses. Notification usually occurs in early spring.
10. Prior to enrolling, successful applicants must meet the immunization requirements set forth in the "General Information" section of this bulletin. Prior to entering the fourth professional year, students must provide proof of immunity to hepatitis B, a negative PPD test and satisfy all other university immunization requirements.

The following criteria are considered in judging applicants:

- college attended
- academic workload carried
- college overall GPA
- chemistry, biology and math proficiency
- outside activities and achievements in high school and college
- PCAT scores
- written and oral communication skills
- extent of exposure to pharmacy practice
- extent of exposure to other health disciplines
- personal interview

Time demands for this full-time program are rigorous. In general, the first three years require a Monday – Friday (8 a.m. – 6 p.m.) commitment for lectures, conferences, laboratories and off-campus visits to area pharmacy



practice sites. The fourth year is devoted to experiential learning at sites located throughout Virginia. Students enrolling in the four-year professional degree program must agree to the possibility of being assigned to sites beyond the Richmond metropolitan area (e.g., eastern, northern or western Virginia). Candidates must assess personal obligations prior to seeking application.

VCU does not discriminate against qualified applicants for admission who have disabilities, and seeks to provide reasonable accommodation to applicants and admitted students who identify themselves as having disabilities. Academic requirements essential to the program or to directly related licensing requirements will not be substituted. Upon acceptance into the program, students in need of accommodation may contact the MCV Campus coordinator for students with disabilities at (804) 828-9782 to discuss their needs.

Further information may be obtained by writing to the Chair, Admissions Committee, School of Pharmacy, Virginia Commonwealth University, P.O. Box 980581, Richmond, VA 23298-0581. Applicants also may call a toll-free telephone number, (888) 212-9287 for assistance.

## Curriculum

### First professional year

First semester	credits
ANAT 505 Anatomy	3.0
MEDC 501 Medicinal Chemistry I	2.0
BIOC 523 Biochemistry I	3.0
PCEU 503 Principles of Pharmacy	3.0
PCEU 517 Pharmacy Skills Laboratory I	1.0
PHAR 521 Pharmacy and the U.S. Health Care System	2.0
PHAR 525 Communications in Pharmacy Practice	2.0
PHAR 556 Introduction to Pharmacy Practice	1.0
	<hr/>
	17.0

### Second semester

BIOC 524 Biochemistry II	2.0
PHIS 506 Physiology and Pathophysiology	5.0
MICR 501 Microbiology	4.0
PCEU 504 Biopharmaceutics and Dosage Forms	2.5
PCEU 506 Biopharmaceutics and Pharmacokinetics	2.0
PCEU 518 Pharmacy Skills Laboratory II	1.0
PHAR 558 Pharmacy Practicum II	0.5
	<hr/>
	17.0

### Second professional year

First semester	credits
PHTX 603 Pharmacology I	3.0
MEDC 602 Principles of Pharmaceutical Analysis	2.0
MEDC 603 Medicinal Chemistry II	2.5
PCEU 617 Pharmacy Skills Laboratory III	1.0
PHAR 627 Principles of Pharmacy Practice Management	4.5
PHAR 643 Pharmacotherapy I	3.5
PHAR 657 Pharmacy Practicum III	0.5
	<hr/>
	17.0
Second semester	
PHTX 604 Pharmacology II	4.0
MEDC 604 Medicinal Chemistry III	2.5
PCEU 606 Applied Pharmacokinetics	2.5
PHAR 644 Pharmacotherapy II	4.5
PHAR 658 Pharmacy Practicum IV	0.5
Elective(s)	2.0-3.0
	<hr/>
	16.0-17.0

### Third professional year

First semester	credits
PHAR 701 Pharmacy Ethics	2.0
PHAR 743 Pharmacotherapy III	3.0
PHAR 745 Drug Literature Evaluation	4.0
PHAR 747 Physical Assessment	1.0
PHAR 757 Pharmacy Practicum V	0.5
Elective(s)	5.0-6.0
	<hr/>
	15.5-16.5
Second semester	
PHAR 718 Pharmacy Skills Laboratory IV	1.0
PHAR 724 Pharmacy Law	3.0
PHAR 744 Integrated Therapeutics	3.0
PHAR 748 Self-Medication Awareness and Community Health	3.0
PHAR 758 Pharmacy Practicum VI	0.5
Elective(s)	5.0-6.0
	<hr/>
	15.5-16.5

### Fourth professional year

PHAR 760 Acute Care Pharmacy Practice	5.0
PHAR 761 Hospital Pharmacy Practice	5.0
PHAR 762 Geriatrics Pharmacy Practice	5.0
PHAR 763 Primary Ambulatory Care Pharmacy Practice	5.0
PHAR 764 Community Pharmacy Practice	5.0
PHAR 765 Elective I	5.0
PHAR 766 Elective II	5.0
PHAR 767 Elective III	5.0
PHAR 768 Advanced Community Pharmacy Practice	5.0
	<hr/>
	45.0

Approximately half of the students in the fourth professional year may be obliged to travel and reside some distance from Richmond to participate in pharmacy practice clerkships. No refund of payments for tuition, fees or other expenses may be expected by the students since credit is granted for the time spent in this phase of the program. No stipends may be earned by the students in connection with any professional practice program for which the school grants credit.

## Academic regulations

Matriculation in the School of Pharmacy implies a willingness on the part of students to comply with university rules and regulations and to conduct themselves in a manner befitting members of the profession the students seek to enter. The program of study and regulations regarding courses of study, student conduct, etc. are subject to modification without notice. All rules and regulations set forth in this bulletin, as well as other statements issued by administrative officers of the university, apply until further notice.

### Probation

Students may be placed on probation by either the Admissions Committee or the Academic Performance Committee. Probation is a status indicating that the student's scholarship is deficient and is expected to be improved to a level considered to be satisfactory by the faculty. Students who fail to meet probationary stipulations may expect to have their normal progress through school interrupted. They may be required to attend summer school, to repeat a year or to withdraw. Students on probation during the first three years of the professional program are neither allowed to hold an elected office in a student association nor be eligible for nomination as an officer in a student association. Students are not permitted to represent the school in extracurricular activities (e.g., representation at a local, regional or national association meeting, or other professional event). Students are

expected to discontinue any outside employment during the academic year. Students are not eligible to pledge a professional fraternity. Students are encouraged to avail themselves of special tutoring and counseling services for improving their academic performance. Additionally, students during the fourth year of the professional program must complete all required and elective advanced pharmacy practice experiential rotations at sites within the VCU School of Pharmacy and the preceptor must have a current faculty appointment. Students are expected to discontinue any outside employment while completing advanced pharmacy practice experiential rotations. Expiration of probationary status occurs following the equivalent of an academic year (i.e., two consecutive semesters of successful academic performance during the first three professional years and upon the successful completion of all advanced pharmacy practice experiential rotations in the fourth year.

#### **Outside work**

In general, the faculty believes that students should give first priority to their school work. Students able to maintain academic standing are not restricted with respect to outside employment. Students in academic difficulty will be advised to cease or drastically curtail any outside employment.

#### **Honor code**

All students are governed by the honor code and regulations of the student body organization. A detailed description of the Honor Council's rules of procedure is available upon request.

#### **Faculty advising program**

Each student in the School of Pharmacy is assigned a faculty adviser who can assist with academic and personal problems. The faculty adviser also serves as the student's mentor in the pharmacy practicum. Students usually remain with the same adviser throughout their attendance in the School of Pharmacy.

There is a faculty adviser to the Interfraternity Council as well as an adviser for each of the professional pharmacy fraternities. Each of the student chapters of professional pharmacy organizations on campus also operates with a faculty adviser.

#### **Attendance regulations**

The following regulations apply specifically to students enrolled in the Doctor of Pharmacy program in all of their required and elective courses offered by departments in the School of Pharmacy and to required basic science courses offered by the School of Medicine. In courses in which these regulations apply, other students enrolled with pharmacy students also are subject to the regulations.

1. The faculty considers class attendance at lectures to be an important component in the successful acquisition of knowledge and skills required of the Doctor of Pharmacy candidate. Students are strongly encouraged to attend all classes and conferences. An individual faculty member may require attendance in his or her course and establish penalties for those who are absent without an excuse from the dean's office.
2. Attendance at laboratory and prelaboratory classes is mandatory. Students must complete all laboratory assignments before a passing grade can be assigned. An excused absence from the dean's office is

required for missing a laboratory or prelaboratory class with the ability to make up the work with credit. Students without an approved absence are still required to make up the work but will not receive credit toward their course grade.

3. Students must take tests (e.g., quizzes, laboratory practicals, examinations) and complete all other assignments at the time designated by the course coordinator. Students must recognize that faculty may give unannounced tests at any time during a course, consistent with documentation in a course syllabus. Students who miss any test in any course without an excused absence from the dean's office will receive a grade of zero for the specific test.
4. Attendance during each assigned clerkship period is mandatory. If a student is unable to attend to required clerkship responsibilities because of illness or other exceptional circumstances, the preceptor must be notified immediately. It is the responsibility of the student to also notify the clerkship coordinator concerning a plan to make up the absence, with the approval of the preceptor. Documentation of the absence and approval to make up the absent time will be maintained in the student's record.
5. Absences may be excused under certain conditions. Requests for excuses for unavoidable absences must be submitted to the dean's office, on an Absence Record form, within 24 hours of returning to the School of Pharmacy. The student must complete the Absence Record form with an explanation for the absence. Further explanation, if necessary, may be provided to the associate dean for admissions and student services. It is a violation of the honor code to make false or misleading statements on the Absence Record form. In the event of an unexcused absence, the student is responsible for all work missed.
6. A guiding principle in determining whether or not an absence will be excused is that the absence is caused by circumstances beyond the student's control. The following are considered valid excuses for being absent from a class or clerkship.
  1. Illness, a medical emergency, a dental emergency. The school normally accepts the student's judgment that the condition was serious enough to justify the absence from class; however, the school reserves the right to require a medical opinion, particularly if the period of absence is prolonged or is repetitive. The school will require a written medical opinion when a student is absent from taking a scheduled test or final examination. If the absence is a result of a medical emergency, the student will be required to sign a written release for the school to obtain documentation from their physician describing the exact nature of the illness or emergency. This record will be submitted to the associate dean for admissions and student services as a confidential document.
  2. Death of a relative or friend. Students will be excused from class to attend funerals. Absence beyond the day of the funeral will be excused for periods of mourning required by a student's religious or cultural tradition, or when a student is too grief-stricken to return immediately to class.
  3. Mandatory court appearance.
  4. Mandatory religious observances. Students who anticipate absences from class because of religious obligations should submit a list of their anticipated absences at the beginning of each semester to the dean's office. The student must also submit an absence form following each absence.

5. Failure of private, public or university transportation. Students are expected to take reasonable precautions to assure that the transportation method used is fully functional (e.g., maintaining personal automobile, avoiding the last possible return airline flight to Richmond). Proof of transportation failure will be required.
6. Attendance at professional meetings. Students in good academic standing may receive an excused absence from class to attend a meeting of a professional pharmacy organization. The student must complete an Absence Record form in advance of attending a professional meeting. A policy statement containing eligibility criteria is distributed to all students.
7. Tardiness is a form of absence that also may be excused using the criteria mentioned above. Students arriving late for a test may be given the test without an excused absence but will not be allowed extra time beyond the scheduled termination of the test. Once a student has completed the test and left the room, late-arriving students will not be permitted to take the test unless the absence is excused.
8. Absences that are not reported within 24 hours after the student returns to school will be considered unexcused. It is not the responsibility of a faculty member to determine whether an absence is excused. This determination will be made by the dean's office.
9. Students are expected to make every effort to keep abreast of their assignments during an absence. They should also be prepared to take tests upon their return to the school or at the discretion of the faculty member after considering the student's academic schedule. If, in the opinion of the dean's office, the nature of a student's absence made it impossible for that student to prepare for a test, the student will be granted an extension for taking the test.
10. A faculty member should not give a make-up test before confirming that a student's absence has been excused. The faculty member usually provides an equivalent make-up test within a reasonable period of time. The type and format of the make-up exam will be determined by the faculty member. Within the framework of the honor code, it may be possible to administer the same examination no more than 48 to 72 hours after the originally scheduled examination. Any make-up examination should be scheduled as soon as possible to avoid impeding the student's academic progress.

#### Promotion

Attending pharmacy school is not a right acquired simply by conforming with the entrance requirements and paying tuition and fees. For this reason the dean and the Academic Performance Committee require that marginal or failing performance be improved or that the student withdraw from school. "D" grades are indicative of marginal performance. Careful consideration is given during the promotions process not only to the student's grades but also to his or her probity, industry and scholastic ability.

These guidelines delineate the course of action to be taken by the committee. Decisions regarding individual students will be made in accordance with these guidelines. Consideration will be given to pertinent information and extenuating circumstances for individual cases. The following statements present the prominent features of the promotions process.

1. Students are evaluated for progress at the end of each semester. The Academic Performance Committee assesses student progress for

each of these periods. At the end of the fourth year the entire faculty will decide whether or not students have satisfied all requirements for graduation. Promotion decisions are based on achievement during the year under review and on the student's overall progress.

2. Students who have passed the work of an academic year with grades of "C" or better in all courses will ordinarily be advanced to the next higher class.
3. The Academic Performance Committee for the year involved thoroughly reviews the academic record of each student who fails to pass a course, receives a "D" grade, does not maintain a GPA of 2.0 or better for the year or semester in question, or is on probation. Following this review, the committee may recommend promotion on a probationary basis, require a repeat of all or a part of previous work, or terminate the student's enrollment.
4. Students who fail two or more courses during the program will be dismissed.
5. A student who earns "D" grades for six credits or more of class work in any year and/or a GPA of less than 2.0 in any year will be subject to academic probation, dismissal or may be asked to repeat the year.
6. Students will be subject to academic probation, dismissal or may be asked to repeat the year if they earn more than one "D" or "F" grade in any one of the following sequences of related courses: basic health sciences, medicinal chemistry, pharmacy and pharmaceuticals, pharmacotherapeutics, and pharmacy administration.
7. Students who fail to meet conditions of probation will be required to withdraw or repeat a year's work. Students will not be allowed to repeat more than one year of the curriculum.
8. A student must have passed all courses from the first three years of the curriculum to qualify for entry into the final year of the program.

#### Withdrawal

Students finding it necessary to withdraw from the School of Pharmacy must comply with the provisions for withdrawal set by the university.

The dean of the School of Pharmacy will not approve a request for withdrawal until the student has submitted a letter of resignation.

Students withdrawing without approval and failing to check out laboratory lockers will be assessed a fee and any charges resulting from the need to replenish the contents of the lockers.

#### Readmission

Students seeking readmission to the School of Pharmacy will be evaluated on their total academic record. Applicants for readmission to the first professional year will not be given priority over new applicants but must compete with them on an equal basis. Readmission in advanced standing will be considered on a space-available basis.

#### Graduation

Students are recommended and approved for the Doctor of Pharmacy degree by the faculty of the School of Pharmacy. Candidates must meet the following requirements:

1. Be of good moral character.

2. Satisfactorily complete all the required work in a timely fashion, which will not normally exceed five years from the date of initial enrollment.
3. Pay all fees.
4. Complete the last year's work for the degree in residence in this school.
5. Be present at the commencement-related exercises unless excused in writing and in advance by the dean.
6. Satisfactorily complete the minimum number of required advanced practice experience rotations and demonstrate the attainment of minimum competencies.

## Financial aid

See the [Professional studies](#) section of this bulletin.

## Courses of instruction

Enrollment in courses included in the Doctor of Pharmacy curricula summarized on the preceding pages requires the approval of the dean of the School of Pharmacy unless the student has been admitted to the Doctor of Pharmacy Program.

### Pharmacy, Doctor of (Pharm.D.), Nontraditional program

#### Admission requirements

Applicants for this program must hold a Bachelor of Science in Pharmacy degree and a current license to practice pharmacy in the United States.

Prior to enrolling, successful applicants must meet the immunization requirements set forth in the "General Information" section of this bulletin. Prior to beginning the practice rotations students must provide proof of immunity to hepatitis B.

VCU does not discriminate against qualified applicants for admission who have disabilities, and seeks to provide reasonable accommodation to applicants and admitted students who identify themselves as having disabilities. Academic requirements essential to the program or to directly related licensing requirements will not be substituted. Upon acceptance into the program, students in need of accommodation may contact the MCV Campus coordinator for students with disabilities at (804) 828-9782 to discuss their needs.

#### Program curriculum

The recommended course work totals 50 credits: 20 credits for didactic courses and 30 credits for clinical clerkships. Waivers for up to nine didactic credits and 20 clerkship credits may be made based on the student's professional practice portfolio or testing out of didactic courses.

The Professional Practice Evaluation Workshop is to explain the process for the preparation and submission of a portfolio of practice experience and what has been learned from these practice experiences. The portfolio will be used by the program committee for decisions of waiver of clinical experience credits.

Clinical experience (clerkships) may be taken full time or part time at a minimum of 10 hours per week. Clerkships may be completed in the student's practice site if adequate access to patients is available.

## Didactic and experiential components

### Recommended

Professional Practice Evaluation Workshop	credits
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### Required courses – didactic

Evaluation of Drug Literature and Information Sources	3
Clinical Pharmacokinetics	3
Physical Assessment	1
Advanced Pharmacotherapeutics I	5
Advanced Pharmacotherapeutics II	5
Advanced Pharmacy Practice Management	3
	18

### Required courses – experiential

Clinical Experience I	5
Clinical Experience II	5
Clinical Experience III	5
Clinical Experience IV	5
Clinical Experience V	5
Clinical Experience VI	5
	30

### Combined Doctor of Pharmacy (Pharm.D.) and Master of Business Administration (M.B.A.)

The Pharm.D./M.B.A. program seeks to prepare pharmacists for careers that encompass pharmacy and business theories and principles. The program is designed to take advantage of efficiencies and electives in both the Pharm.D. and M.B.A. programs. Students in the combined program can earn both degrees and save as much as one year or more over the time required for enrolling in the programs separately.

Students may be admitted in the program during their first year of enrollment in the Pharm.D. program. Applicants must be an enrolled student in the Pharm.D. program, have demonstrated a good academic record and have successfully completed the Graduate Management Admission Test (GMAT).

To get both degrees, students will take all pharmacy courses unless waived, the seven business foundation courses, the nine M.B.A. core courses and three elective courses. The elective M.B.A. courses may be taken from pharmacy administration courses at the 600 level, and a combination of a business seminar course and an elective advanced pharmacy practice experience in pharmacy management. The business foundation courses can be taken during the first two years in the pharmacy program with summer session(s). The M.B.A. core courses can be taken during the third and fourth years in the pharmacy program. The business electives can be taken during the fourth and fifth years in the combined program.

Students interested in pursuing the Pharm.D./Master of Business Administration dual degree program must first obtain admission to the Pharm.D. program. Admitted Pharm.D. students who desire to add the M.B.A. degree to their program then must apply to the M.B.A. program. Upon admission to the M.B.A. program, a Pharm.D. student will be considered a dual-degree seeking student. Students generally will register for a mix of School of Business courses and School of Pharmacy courses in their fourth, fifth and sixth semesters of the pharmacy program.

Students categorized as a Pharm.D. student will be charged tuition and fees from the School of Pharmacy and will be eligible to receive financial aid awards as Pharm.D. students. Student categorized as M.B.A. students will be charged tuition and fee rates as a graduate student and be eligible to receive financial awards as a graduate student.

## Admission requirements

Students interested in pursuing the Pharm.D./M.B.A. dual degree program must first obtain admission to the Pharm.D. program. Admitted Pharm.D. students who desire to add the M.B.A. degree to their program must apply to the M.B.A. program using the Application for Graduate Study found at the Graduate School Web site: <http://www.vcu.edu/graduate>.

A complete application to the M.B.A. program includes:

- Application for Graduate Study and application fee.
- Request for In-state Tuition Rates (as applicable).
- Three letters of reference, including a letter of support from the School of Pharmacy.
- Official transcripts from all universities previously attended, including current VCU transcript.
- Current GMAT test score.
- Interview with director of graduate programs in School of Business.

## Tuition and financial aid considerations

Upon admission to the M.B.A. program, a Pharm.D. student will be considered a dual degree-seeking student. Students will most often register for a mix of School of Business courses and School of Pharmacy courses each semester of the program. The School of Pharmacy and School of Business have agreed that dual degree-seeking students will be considered Pharm.D. students in years P1, P2, P3 and P5. Students will be considered M.B.A. (graduate) students in year P4. When categorized as Pharm.D., a student will be charged tuition and fees from the School of Pharmacy and will be eligible to receive financial aid awards as a Pharm.D. student. When categorized M.B.A. (graduate) a student will be charged the graduate tuition and fee rate of the Monroe Park Campus and will be eligible to receive financial aid awards as a graduate student.

## Curriculum requirements

To earn both degrees, students will complete the following requirements. For the Pharm.D. program, all required Pharm.D. prerequisite and required courses must be taken unless waived by the appropriate representative of the School of Pharmacy. For the M.B.A. program requirements, the foundation courses listed below must be taken. Courses may be waived for students who have taken the equivalent material at the undergraduate level.

ACCT 507 Fundamentals of Accounting  
ECON 500 Concepts in Economics  
FIRE 520 Financial Concepts of Management  
MGMT 524 Statistical Elements of Quantitative Management  
MGMT 540 Management Theory and Practice  
MRBL 530 Fundamentals of the Legal Environment of Business  
MRBL 570 Concepts and Issues in Marketing

The following nine courses of the M.B.A. Advanced Program will be required for each student:

**Semester one:** (to be taken at same time)  
INFO 661 Information Systems for Managers  
MGMT 641 Organization Leadership and Project Team Management

**Semester two:** (to be taken at same time)  
MGMT 675 Operations Management

One of the following courses: 3  
ECON 610 Managerial Economics  
INFO 644 Emerging Information Technologies  
MRBL 671 Marketing Management

### Remainder of the Advanced Program (including courses not taken in semester two)

ACCT 608 Managerial Accounting 3  
ECON 610 Managerial Economics 3  
FIRE 621 Cases in Financial Management 3  
INFO 664 Emerging Information Technologies 3  
MGMT 642 Business Policy (to be taken after completion of 15 credits of advanced program)  
MRBL 671 Marketing Management  
Electives

Three M.B.A. elective courses may be taken in the School of Business or by completing approved Pharm.D. electives and/or an applied pharmacy practice experience in pharmacy management, as individually approved by the director of graduate programs in the School of Business.

The key to successful completion of the Pharm.D./M.B.A. dual degree program will be timely and continuing advising from both the appropriate School of Pharmacy adviser and the director of graduate programs in the School of Business. For this reason, students are encouraged to seek admission to the dual degree program as early in their Pharm.D. program as possible.

## Combined Certificate in Aging Studies (Post-baccalaureate graduate certificate) and Doctor of Pharmacy (Pharm.D.)

The Department of Gerontology in cooperation with the School of Pharmacy provides an opportunity for students in the Doctor of Pharmacy program to complete the certificate. This 21-credit program is designed to integrate the required independent study project in gerontology into the Pharm.D. curriculum's clerkship assignment.

	credits
GRTY 601 Biological and Physiological Aging	3
GRTY 602 Psychology of Aging	3
GRTY 605 Social Gerontology	3
GRTY 606 Aging and Human Values or	3
GRTY 616 Geriatric Rehabilitation or	
GRTY 691 Geriatric Interdisciplinary Team Training	
GRTY 692 Independent Study in Gerontology	2
PHAR 670 Geriatric Pharmacotherapy	3
PHAR 745 Drug Literature Evaluation	4
	<hr/> 21

## Combined Doctor of Pharmacy (Pharm.D.) and Doctor of Philosophy (Ph.D.)

In their first two years (P-1 and P-2), the Pharm.D./Ph.D. students will complete the required Pharm.D. curriculum while attending research seminars, and possibly pursue graduate courses as electives. After admission into the graduate program, the students will take required graduate courses in lieu of Pharm.D. courses during their P-3 (G-1) year followed by graduate research during the summer. During their G-2 through G-4 years, the students will complete the graduate course requirements and their required Pharm.D. clerkships and work on their graduate research project. Stipends and tuition may be provided for students serving as graduate teaching or research assistants. During that period, the student will follow procedures prescribed to Ph.D. students in Pharmaceutical Sciences.

Students can focus on the following research areas within the School of Pharmacy: pharmacotherapy, pharmacokinetics, biopharmaceutical analysis, pharmaceuticals/physical pharmacy, pharmacy administration and medicinal chemistry. Also, students may focus on the following research areas within the School of Medicine: pharmacology and toxicology. The choice of research area determines the required graduate course work.

The combined Pharm.D./Ph.D. program in the School of Pharmacy is a full-time program of professional education while offering an opportunity for advanced study in pharmaceutical sciences. The program recognizes the need for pharmacy practitioners with excellent research skills in clinical, academic, industrial and regulatory environments. The programs are designed to take advantage of efficiencies in both the Pharm.D. and the M.S. or Ph.D. programs, and allow students in the combined programs to complete the program requirements of both programs after five or six years with both degrees being awarded at the same graduation ceremony.

Students may be admitted into the program before or during their first two years of enrollment in the Pharm.D. program. Applicants must demonstrate a good academic record, experience in research (e.g., during summer research fellowships with the school's graduate faculty) and successful completion of the Graduate Record Examination (GRE). Additionally their application must be sponsored by a graduate faculty member.

### Combined Doctor of Pharmacy (Pharm.D.) and Master of Public Health (M.P.H.)

The School of Pharmacy and the Department of Epidemiology and Community Health in the School of Medicine offer a dual degree program that results in a Pharm.D. and M.P.H. This dual degree program offers students the opportunity to achieve a doctorate in pharmacy while also learning about research and the importance of population health. This five-year program requires students to spend their fourth year pursuing the M.P.H. degree and transition back to pharmacy for advanced practice experiences. The students will be required to take 36 of the 45 credits required for the M.P.H. The field study requirement will be satisfied by Pharm.D. special advanced practice experiences in community health during the fifth year of the program.

#### Curriculum

	credit
<b>P1 fall semester</b>	
ANAT 505 Anatomy	3
BIOC 523 Biochemistry I	3
MEDC 501 Medicinal Chemistry I	2
PCEU 503 Principles of Pharmacy	3
PCEU 517 Pharmacy Skills Laboratory I	1
PHAR 521 Pharmacy and Health Care Systems	2
PHAR 525 Pharmacy Communications	2
PHAR 556 Introduction to Pharmacy Practice	1
	17
<b>P1 spring semester</b>	
BIOC 524 Biochemistry II	2
PHIS 506 Physiology and Pathophysiology	5
MICR 501 Microbiology	4
PCEU 504 Biopharmaceutics and Dosage Forms	2.5
PCEU 506 Biopharmaceutics and Pharmacokinetics	2
PCEU 518 Pharmacy Skills Laboratory II	1
PHAR 558 Pharmacy Practicum II	0.5
	17
<b>P2 fall semester</b>	
MEDC 602 Principles of Pharmaceutical Analysis	2.0
MEDC 603 Medicinal Chemistry II	2.5
PCEU 617 Pharmacy Skills Laboratory III	1.0

PHAR 627 Principles of Pharmacy Practice Management	4.5
PHAR 643 Pharmacotherapy I	3.5
PHAR 657 Pharmacy Practicum III	0.5
PHTX 603 Pharmacology I	3.0
	17.0
<b>P2 spring semester</b>	
MEDC 604 Medicinal Chemistry III	2.5
PCEU 606 Applied Pharmacokinetics	2.5
PHAR 644 Pharmacotherapy II	4.5
PHAR 658 Pharmacy Practicum IV	0.5
PHTX 604 Pharmacology II	4
Elective(s)	2-3
	16-17
<b>P3 fall semester</b>	
EPID 600 Introduction to Public Health	3
PHAR 701 Ethics in Pharmacy Practice	2
PHAR 743 Pharmacotherapy III	3
PHAR 745 Drug Literature Evaluation	4
PHAR 747 Physical Assessment	1
PHAR 757 Pharmacy Practicum V	.5
Pharmacy elective(s)	2-3
	15.5-16.5
<b>P3 spring semester</b>	
EPID 603 Health Politics and Policy	3
PHAR 718 Pharmacy Skills Laboratory IV	1
PHAR 724 Pharmacy Law	3
PHAR 744 Integrated Therapeutics	3
PHAR 748 Self-Medication Awareness and Community Health	3
PHAR 758 Pharmacy Practicum VI	.5
Elective(s)	2-3
	15.5-16.5
<b>P4 fall semester</b>	
BIOS 543 Statistical Methods I	3
EPID 571 Principles of Epidemiology	3
EPID 602 Public Health Systems Organization	3
EPID 604 Occupational and Environmental Health	3
EPID 693 Fundamentals of Public Health Data Management	3
	15
<b>P4 spring semester</b>	
EPID 605 Health Behavior	3
EPID 606 Epidemiology Methods II	3
EPID 691 Research Project	3
Epidemiology elective	3
	12
<b>P5 year</b>	
PHAR 760 Acute Care Pharmacy Practice	5
PHAR 761 Institutional Practice Rotation	5
PHAR 762 Geriatrics Practice Rotation	5
PHAR 763 Ambulatory Care Rotation	5
PHAR 764 Community Practice Rotation	5
PHAR 765 Elective I (in public health)	5
PHAR 766 Elective II (in public health)	5
PHAR 767 Elective III	5
PHAR 768 Advanced Community Pharmacy Practice	5
Total	42-45

### Combined Doctor of Pharmacy (Pharm.D.) and Master of Science (M.S.) in Pharmaceutical Sciences

The School of Pharmacy offers a Pharm.D./Master of Science in Pharmaceutical Sciences as a combined graduate/professional degree

program that teaches individuals to analyze and solve problems of interest to pharmacists. Students develop a broad range of skills by taking classes and working closely with faculty. Since the degree is offered concurrently with the professional pharmacy degree, certain efficiencies can be realized that permit students to graduate sooner than might be expected; although, this degree may require up to two years of study beyond the Pharm.D. program depending on the student's educational background and chosen area of study. Students will take the required Pharm.D. curriculum, with selected substitutions of required courses with graduate-level courses, in addition to the graduate curriculum.

In their first two years (P-1 and P-2), the Pharm.D./M.S. students will complete the required Pharm.D. curriculum while attending research seminars, and possibly pursue graduate courses as electives. After admission into the graduate program, the students will take required graduate courses in lieu of Pharm.D. courses during their P-3 (G-1) year followed by graduate research during the summer. During their G-2 through G-4 years, the students will complete the graduate course requirements and their required Pharm.D. clerkships and work on their graduate research project. Stipends and tuition may be provided for students serving as graduate teaching or research assistants. During that period, the student will follow procedures prescribed to Ph.D. students in Pharmaceutical Sciences.

Students can focus on the following research areas within the School of Pharmacy: pharmacotherapy, pharmacokinetics, biopharmaceutical analysis, pharmaceuticals/physical pharmacy, pharmacy administration and medicinal chemistry. Also, students may focus on the following research areas within the School of Medicine: pharmacology and toxicology. The choice of research area determines the required graduate course work.

The combined Pharm.D./M.S. program in the School of Pharmacy is a full-time program of professional education while offering an opportunity for advanced study in pharmaceutical sciences. The program recognizes the need for pharmacy practitioners with excellent research skills in clinical, academic, industrial and regulatory environments. The programs are designed to take advantage of efficiencies in both the Pharm.D. and the M.S. program, and allows students in the combined program to complete the program requirements of both programs after five or six years with both degrees being awarded at the same graduation ceremony.

Students may be admitted into the programs before or during their first two years of enrollment in the Pharm.D. program. Applicants must demonstrate a good academic record, experience in research (e.g., during summer research fellowships with the school's graduate faculty) and successful completion of the Graduate Record Examination (GRE). Additionally their application must be sponsored by a graduate faculty member.

## Physical Therapy Track in Anatomy Ph.D. program

### Admission requirements summary

#### Physical Therapy Track in Anatomy Ph.D. program

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall	Applications received prior to Jan 7 given priority consideration	B.S., M.S. or D.P.T. in Physical Therapy  Contact Physical Therapy or Anatomy for specific admission requirements

The departments of Anatomy and Neurobiology and Physiology of the School of Medicine, together with the Department of Physical Therapy of

the School of Allied Health Professions offers Ph.D. programs in anatomy-physical therapy and physiology-physical therapy. The goals of the doctoral programs are to train students in research and educational skills in preparation for students to function as physical therapy faculty members. Application is made to either the Department of Anatomy and Neurobiology or the Department of Physiology. Acceptance into either of the programs requires approval by the admission committees of the cooperating departments. **Graduates receive either the Ph.D. in Anatomy or the Ph.D. in Physiology.**

Students in the Anatomy/Physical Therapy Doctoral Program take required courses within the departments of Anatomy and Neurobiology and Physical Therapy. Students in the Physiology/Physical Therapy Program take required courses within the departments of Physiology and Physical Therapy. (Other courses may be required by the students dissertation committee.) In both programs, the student plans and conducts a research study generally under the direction of a faculty member of the Department of Physical Therapy; however, the dissertation adviser may be from either of the two primary departments. In addition, the student is required to assist in teaching three courses.

In addition to the requirements listed above, admission to either the anatomy/physical therapy or physiology/physical therapy programs requires:

- a minimum of a bachelor's degree,
- graduation from an accredited program in physical therapy (or equivalent, if trained outside the United States) and
- demonstrated clinical experience in physical therapy.

Applicants to the physiology/physical therapy program also are encouraged to have completed at least one course in organic chemistry. Applicants should refer to the departmental Web site for more information or contact:

Dr. Sheryl Finucane, Director of Graduate Studies  
Department of Physical Therapy  
School of Allied Health Professions  
Virginia Commonwealth University  
P.O. Box 980224  
Richmond, VA 23298-0224  
Phone: (804) 828-0234

For additional information about the collaborating departments, refer to their Web sites:

- Department of Physical Therapy
- Department of Anatomy and Neurobiology
- Department of Physiology

## Department of Medicinal Chemistry

The Department of Medicinal Chemistry applies the latest strategies and concepts from several broad scientific disciplines including synthetic chemistry, molecular modeling, computational biology, structural genomics, and pharmacology.

### Administration

**William H. Soine**  
Professor and Interim Department Chair



## Department of Pharmaceutics

The Department of Pharmaceutics offers graduate study leading to the degrees of Master of Science and Doctor of Philosophy in Pharmaceutical Sciences. In addition, students may elect to pursue a joint Pharm.D./Ph.D. program. These programs provide the preparation and research experience for academic, federal and industrial careers.

### Administration

**Peter R. Byron**

Professor and Department Chair

## Department of Pharmacy

The Department of Pharmacy is the largest of the three departments at the VCU School of Pharmacy. The focus of the Department of Pharmacy is pharmacotherapy (the safe and effective use of drugs in humans), and pharmacy administration (evaluation of the social and economic impact of drug therapy in humans and in health care systems).

### Administration

**Ronald E. Polk**

Professor and Department Chair

# School of Social Work

The School of Social Work was established in 1917 as the Richmond School of Social Economy. Later, renamed the School of Social Work and Public Health, it became the first unit of Richmond Professional Institute. The school developed initially in response to community needs to help World War I veterans with their social and health problems. Subsequent development of the school has expanded activity into all areas of human service. The School of Social Work is one of the oldest of its kind in the South. With the creation of Virginia Commonwealth University in 1968, the School of Social Work became a unit of the university's Monroe Park Campus. The Raleigh Building at 1001 W. Franklin St. houses faculty offices, a student lounge, a classroom and conference rooms.

Richmond provides a unique setting for social work education. The population of the metropolitan area is approximately 800,000 persons. As a community, Richmond is in a period of exciting economic and social growth, permitting varied opportunities for community study and field instruction. As the capital of Virginia, Richmond offers educational opportunities in many state government agencies concerned with the development and provision of social services. In addition to its Richmond campus, the VCU School of Social Work offers an off-campus M.S.W. program in Northern Virginia. Located in Alexandria, its proximity to Washington, D.C. allows additional opportunities with federal agencies and national organizations. In both locations the school's access to a large number of social agencies permits students to participate in the delivery and development of a wide range of social services.

### The profession of social work

The goals of the profession of social work are to provide services to persons who are vulnerable due to a lack of personal, social and/or institutional resources to meet their emotional, health and economic needs. Social work practice is the application of professional knowledge, skills and values across a range of settings and populations. The focus of social work practice is on individuals, couples, families, groups and communities. In addition to direct clinical social work practice, social workers are involved in the administration of human service programs, social planning, the development of social policies, research and evaluation, and in teaching.

In order to achieve the goals of promoting social justice and enhancing well-being for individuals, families, groups and communities, social workers provide a variety of services primarily in public and nonprofit organizational contexts. Examples of the range of settings in which social workers practice include: community centers, public social services, child welfare, residential treatment facilities, schools, community mental health agencies, family and children's service agencies, psychiatric and acute care hospitals, substance abuse treatment facilities, services for the elderly, court services, and adult and juvenile rehabilitation facilities.

The origins of the social work profession were in the settlement house and charity organization societies' movements of the late-19th century. Professional education for social work practice dates to the early 1900s. The contributions of the profession are evidenced in health and mental health care, the well-being of children and families, the development and implementation of social policies, the planning, delivery and evaluation of human services, and a broad base of research on the human condition. The knowledge base of the profession and the integration of related social, behavioral and biological sciences acquired through professional education facilitates the contributions of social workers in multidisciplinary contexts.

Social work practice is designed to enrich the quality of life by enabling individuals, groups, communities and organizations to achieve their greatest potential development. The goal of the School of Social Work at VCU is to provide professional education in response to these needs.

### Administration

1001 West Franklin Street  
P.O. Box 842027  
Richmond, Virginia 23284-2027  
(804) 828-0703  
Fax (804) 828-0716  
[www.vcu.edu/slwwweb](http://www.vcu.edu/slwwweb)

**Frank R. Baskind**  
Dean

**Ann Nichols-Casebolt**  
Associate Dean for Faculty and Research Development

**Marcia P. Harrigan**  
Associate Dean for Student and Academic Affairs

**Kia J. Bentley**  
Director, Ph.D. Program

**Beverly Koerin**  
Director, M.S.W. Program

**Jeffrey Schwamm**  
Director, M.S.W. Off-campus Site in Alexandria

**Humberto Fabelo**  
Director, B.S.W. Program

**Tim Davey**  
Director, Field Education

### Accreditation

Social Work (bachelor's and master's degrees)  
Commission on Accreditation of the Council on Social Work Education

### Financial assistance

Although financial assistance is limited, some funds are available. No prospective student should refrain from seeking admission to the school for financial reasons alone.

### Federally guaranteed loans and work-study program

See Student Financial Assistance in the [Graduate Studies at VCU](#) section of this bulletin.

### Assistantships for doctoral students

Research and other assistantships and fellowships are usually available to doctoral students. Additional information is available from the director of the Ph.D. program.

### School-based awards/endowed scholarships

School of Social Work awards are available to continuing students in the form of school-based tuition assistance and endowed scholarships. Tuition assistance awards are generally made in the summer to be applied during the fall and spring semesters. Scholarship resources and award amounts are very limited. Scholarships are awarded on the basis of the candidate's academic performance, financial status, and/or qualifications for professional study in a particular practice area. Special M.S.W.

scholarships and stipends are available for minority students and students seeking to specialize in the areas of health, mental health and child welfare. Since funds available through the School of Social Work are limited, applicants are strongly urged to seek additional sources to finance their education. A complete listing of tuition assistance and scholarships is available on the school's Web page:

[http://www.vcu.edu/slwwweb/currentstudents/financial\\_support.html](http://www.vcu.edu/slwwweb/currentstudents/financial_support.html).

### **Traineeships**

States may have programs to assist individuals in securing professional education through their departments of social services, mental health, corrections and rehabilitation. These may be consulted locally. The school at times administers and awards federal and university traineeships for qualified M.S.W. students. The school currently awards child welfare stipends, as well as scholarships to those pursuing a focus in aging.

### **H. H. Hibbs Loan Fund**

The H. H. Hibbs Loan Fund was established by the School of Social Work Alumni Association for short-term emergency needs. Enrolled students who wish to apply for a loan should discuss this with their faculty adviser and the associate dean.

### **Continuing education**

Continuing education is a vital part of professional development. The School of Social Work offers a variety of lectures, institutes and workshops as part of the school's commitment to enhance social work practice and broaden educational experiences for students, social workers, field instructors and others in social service delivery systems.

State, regional and local agencies and institutions frequently identify educational and training needs in content or skill areas for selected staff members. The school, through contractual arrangements, contributes expertise in designing and implementing short-term training courses and materials.

Offerings are planned throughout the year. For further information about specific continuing education courses, inquiry should be addressed to the Director of Continuing Education, School of Social Work, Virginia Commonwealth University, 1001 W. Franklin St., Richmond, VA 23284-2027.

### **Associations and student interest groups**

#### **Alumni Association**

The School of Social Work Alumni Association supports the school, its students and faculty. All graduates of the School of Social Work are members of the alumni association. The association falls under the umbrella of the VCU Alumni Association.

#### **M.S.W. Student Association**

The Master of Social Work Student Association is the organization of M.S.W. students enrolled in the school. Established for the purposes of facilitating communication among students and between the student body and the school, the association provides a means by which student concerns and ideas can be formulated and acted upon. It also enables students to conduct a variety of social, civic and educational activities throughout the year.

This organization plays a vital role in the educational process. Student contributions to the governance and curriculum of the school are of value to both the institution and the students. Participation in the decision-making process is accomplished through student representation on committees. Faculty and students work closely together throughout the year to meet the needs of graduate social work education. Students participate as full members of committees within the school.

### **Association of Black Social Workers – VCU Chapter**

The Association of Black Social Workers was established to create and maintain an atmosphere of unity and support among black students in the School of Social Work. It serves to assist students in their personal and professional growth and development. Membership in this organization helps students to develop a keen awareness of the acute needs of the black community and the active role that must be assumed by the dedicated black professional social worker in promoting the general welfare of black citizens. To attain these goals, the organization utilizes the educational process and related experiences of students at the school and in fieldwork. Students are encouraged to participate in all phases of the academic environment.

### **International Student Association (Northern Virginia Campus)**

The International Student Association provides a forum for discussion and serves as a resource for information regarding all aspects of international social work. The association sponsors lectures, speakers and open discussions. All students, faculty or alumni who are interested in international social work are invited to become members or to attend meetings.

### **Doctoral Student Association**

The Doctoral Student Association is a collegial association available to all doctoral students regardless of full- or part-time status. Its primary purpose is to provide information, resources, advocacy and support to students throughout the doctoral program experience. Governance of the association is conducted on a rotating leadership and consensual basis. The Doctoral Student Association provides doctoral student representatives to various committees of the school governance structure.

### **Other student interest groups**

The School of Social Work supports the development of groups that address a variety of student needs and interests.

### **Graduate programs**

The School of Social Work offers two graduate degree programs: a graduate professional curriculum leading to the Master of Social Work degree and a doctoral program in social work. The Bachelor of Social Work also is offered.

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## **Social Work, Doctor of Philosophy (Ph.D.)**

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### **Admission requirements summary**

**Social Work, Doctor of Philosophy (Ph.D.)**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall (full time or part time)	Applications received by Feb 15 given priority for financial aid	GRE-General

**Special requirements:**

In addition to GRE General test, applicants must submit a writing sample.

VCU's Ph.D. in Social Work Program is a research-oriented educational enterprise with a mission to develop scholars and leaders for education and practice in human services. Its vision is a program that builds and nurtures students' intellectual curiosity, creativity and courage, as well as their desire to "make a difference." The program is built around excellence in teaching, mentorship and socialization of students, as well as collaborative involvement in the program by its diverse faculty. Graduates of the program become active in teaching, consultation, research, practice and program evaluation, staff and program development, policy analysis, and advocacy. They are employed in universities and colleges, and in human service organizations and agencies at the local, state, national and international levels. In all the program's activities and events, emphasis is placed on the following areas:

- the development of an intellectual community that values critical and creative thinking
- the connections among the philosophy of science, theory, research and practice
- the analysis and integration of knowledge and values, especially their relevance to diverse populations and issues of social justice

**Educational objectives**

The program's specific educational objectives are achieved and demonstrated by the students through a number of formal and informal mechanisms: required and elective course work, independent study and directed research, a comprehensive exam process, and the dissertation process. The objectives are as follow:

- a critical understanding of multiple paradigms in the philosophy of science and the implications of these for contemporary research.
- mastery of a range of research methodologies and data analysis strategies, and competence in conducting independent inquiry on issues of importance to the field.
- competence in the analysis and application of a wide range of social, behavioral and practice theories.
- an ability to design and propose theoretically and empirically grounded models of social work intervention for coping with personal transitions and challenges, addressing social problems, and promoting equity and social justice.
- a critical understanding of the historical place of social work and social welfare in the evolution of social thought and cultural values.
- expertise in a chosen substantive area related to social work, including skills related to dissemination of this knowledge.

**Admission**

Applicants to the program must have an earned master's degree in social work or a closely related discipline and professional or practice-related experience relevant to their career goals. The relationship between the applicant's professional experience and her/his career objectives should

be clearly articulated in the personal statement submitted with the application materials.

Applicants whose career goals include teaching in a bachelor's- and/or master's-level social work program should be aware that an M.S.W. degree and practice experience, along with the Ph.D., are often considered to be minimal job requirements. In addition, Council on Social Work Education accreditation standards currently require that individuals who want to teach practice courses in particular must have an M.S.W. and at least two years of post-M.S.W. practice experience.

The Graduate Record Examination taken within the past five years is required of all applicants. A combined score of 1,000 or higher on the verbal and quantitative sections is expected. Applicants with combined scores of less than that may wish to retake the GRE before submitting their scores. However, applicants should also be aware that GREs are only part of the application folder and are weighed along with other aspects of the applicants credentials.

Applicants for full-time and part-time study are judged by the same criteria. While it is possible to combine a limited amount of course work with outside employment, all students must complete at least one year of full-time study prior to admission to candidacy.

For application materials, write to: Dr. Kia J. Bentley, Doctoral Program Director, School of Social Work, P.O. Box 842027, Virginia Commonwealth University, 1001 W. Franklin St., Richmond, VA 23284-2027.

**Curriculum**

A minimum of 38 credit hours of course work beyond the master's degree plus a minimum of 16 credit hours of dissertation research is required. The course work includes 26 credit hours of content common for all students, and 12 credit hours of concentration content in a substantive area. The Graduate School requirements for candidacy exams and dissertation committees apply to students in this program. Up to six credit hours may be granted for courses completed at another university. Full-time students ordinarily complete 18-20 credit hours per academic year. Other requirements are detailed below.

**Common curriculum**

Curriculum that is required of all students consists of the following courses (26 credits):

SWKD 701 Quantitative Research  
Methods and Analysis I  
SWKD 702 Quantitative Research  
Methods and Analysis II  
SWKD 703 Philosophical Issues in Social  
Work Knowledge Building  
SWKD 704 Multiparadigmatic Qualitative  
Methods and Analysis  
SWKD 705 Multivariate Analysis in Social  
Work and Human Services Research  
SWKD 708 Social and Behavioral Science  
Foundations for Social Work  
SWKD 710 Social Work, Social Welfare  
and Social Thought  
SWKD 715 Development and Evaluation  
of Social Work Practice Theories and  
Models

Note: Many courses in the common curriculum are completed prior to moving onto more specialized concentration course work.

**Concentration curriculum**

The concentration curriculum allows students to specialize in a substantive area and increase their relevant research skills. This concentration consists of at least 15 hours of course work, including advanced statistics and research courses, and a directed research course designed to assist students in preparing for their dissertation research project. In addition to courses offered by the program, students are expected to enroll in appropriate courses in other schools and departments of the university with approval of their adviser.

#### **Comprehensive exam/admission to candidacy**

Upon completion of all required course work, participants will take a comprehensive exam under the supervision of a Comprehensive Examination Committee. Through the comprehensive examination, students must demonstrate the ability to integrate the whole of their educational experience by adequately addressing complex questions pertinent to the current and developing knowledge base of the human service field. Successful completion of the comprehensive exam results in candidacy status for the Ph.D. degree.

#### **Dissertation**

After admission to candidacy, students proceed to propose, complete and defend their dissertation. This is done under the supervision of a dissertation committee. Students are required to maintain continuous enrollment of at least three credit hours per semester (excluding summer) until they have attained 12 hours of dissertation credit, after which they may enroll for as few as one credit per semester. The dissertation must represent independent research and should be based on an original question or hypothesis relevant to social work. Successful defense of the dissertation completes the requirements for the degree.

## **Social Work, Master of (M.S.W.)**

### **Admission requirements summary**

#### **Social Work, Master of (M.S.W.)**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.W.	<b>Regular Standing</b>		
	Full-time – Fall		
	Part-time – Fall	Feb 1	
		Feb 1	
	<b>Advanced Standing</b>		
	Summer only – Richmond campus		
		Dec 1	

#### **Special requirements:**

If applying for off-campus program for concentration year, indicate location in item 5 on application

See Social Work [Web site](#) for supplemental academic information form.

The school offers a graduate professional curriculum accredited by the Commission on Accreditation of the Council on Social Work Education leading to the Master of Social Work degree. The M.S.W. is offered on the Monroe Park Campus in Richmond and at an off-campus site in Northern Virginia.

The purpose of the M.S.W. program at VCU is to educate persons for advanced practice in either clinical social work or social work administration, planning and policy practice. The guiding principle in educating students is the promotion of a more just society that includes a commitment to the value of diversity and social work practice in a multicultural society. The VCU School of Social Work emphasizes critical thinking, self-awareness, data-based decision making and ethical integrity.

Graduates of this program will be able to address personal and social problems; formulate, implement and evaluate policies and programs;

engage in knowledge development for the profession; and influence community decision making. The educational program focuses on service to and empowerment of people who experience oppression or vulnerability due to inadequate or inequitable distribution of personal, social or institutional resources.

Within this context, social work practice is defined as the application of professional knowledge, skills and values across a range of settings and populations for the prevention and amelioration of personal and social problems. The interactions among persons and their environments are the primary targets of social work practice. Services provided by social workers include the restoration, rehabilitation, maintenance and enhancement of optimal functioning of individuals, families, groups, communities and organizations.

Knowledge for social work practice is based on analysis and critical application of qualitative and quantitative research from within the profession and related social, behavioral and biological sciences. Skill in professional practice is based on the differential application of theories and research findings about people in their sociocultural and organizational contexts. Skill is developed by the social worker through the educational process, self-critical practice and the use of supervision and consultation. Values in social work practice are articulated in the profession's code of ethics and reflect the core values of service, social justice, dignity and worth of each individual, importance of human relationships, integrity, and competence.

### **Admission**

Full-time or structured part-time program applicants are admitted to begin study in the fall semester only. Advanced standing program applicants are admitted for the summer session only. At the time of application, applicants may apply for only one of the following: full time on-campus Richmond, full time off-campus Northern Virginia, part time on-campus Richmond, part time off-campus Northern Virginia, or advanced standing. Application deadlines are Feb. 1 for full-time or part-time programs and Dec. 1 for the Advanced Standing Program. Application forms and instructions for applying to all graduate programs are available on the Graduate School Web site at [http://www.vcu.edu/graduate/ps/apply\\_options.html](http://www.vcu.edu/graduate/ps/apply_options.html).

#### **General admission requirements**

Within the policies established by the University Graduate Council, the School of Social Work has established the following minimum criteria for admission to the 60-credit full-time or part-time program:

- a bachelor's degree from an accredited college or university,
- a cumulative GPA of 2.7 on a 4.0 scale for all undergraduate course work and a 3.0 ("B") for the last 60 credits,
- a broad liberal arts background. Applicants must have completed a minimum of 30 semester credits in the liberal arts. Applicants must have completed at least one course (unless otherwise specified) in each of the following four areas:
  - **Mathematics/computer sciences:** math, logic, statistics, computer sciences
  - **Humanities:** English composition, literature, art history, music appreciation, philosophy, languages, religious studies, multicultural studies
  - **Social and behavioral sciences:** psychology, sociology, anthropology, history, political science, economics (with at least three credits in psychology and three credits in sociology)

- **Biology and physical sciences:** anatomy/physiology, botany, general biology, zoology, chemistry, ecology, physics, geology, astronomy (with a minimum of three credits in human biology content).

Applicants who have not completed all the liberal arts prerequisites may be considered for admission but must have completed the prerequisite courses prior to enrollment and must provide official transcripts to document their completion. Courses may be completed at a community college or four-year institution. In addition to the academic requirements, the applicant must demonstrate commitment to social welfare and social justice. This should be reflected in (1) the personal statement and (2) the applicant's academic background, social work employment, internships and volunteer work in community agencies serving vulnerable and/or oppressed populations.

#### General admission procedures

Applications will be reviewed when they are complete. This includes the application form, three letters of reference (such as from faculty, employers, colleagues who know the applicant's academic and work/volunteer abilities), official transcripts from all undergraduate and graduate colleges and universities attended, a personal statement, the supplemental Academic Information form and an employment resume. The applicant is responsible for ensuring that all materials are submitted prior to the application deadline. Applicants are encouraged to submit their materials well before the deadline.

Some early decisions will be made on very strong applications; the majority of decisions will be made after the application deadline when the entire applicant pool can be considered. The admission review process includes faculty, practitioner, and administrative review of the applications. Reviewers consider scholarship ability, academic background, writing skills, work and volunteer experience, and personal qualities that indicate potential to meet the requirements of the social work profession. The school is particularly committed to ensuring a student population that reflects the multicultural and diverse nature of American society.

#### Admission to the Advanced Standing Program

The Advanced Standing Program leads to a Master of Social Work degree upon completion of 39 credit hours. The program begins in early June, continues through the summer, and culminates with graduation the following May. The Advanced Standing Program is a full-time program only and cannot be pursued on a part-time basis.

Admission to the Advanced Standing Program is available to a select group of students with a bachelor's degree from an undergraduate social work program (B.S.W.), accredited by the Commission on Accreditation of the Council on Social Work Education, completed no more than five years prior to the date of application to the M.S.W. Program.

The minimum requirement for admission to the Advanced Standing Program is a 3.2 GPA on a 4.0 scale for the last 60 semester hours of academic work and a 3.0 cumulative GPA. Exceptions may be made to the GPA requirements for applicants with exceptional circumstances.

As part of the application packet, applicants must submit their field practicum evaluation(s) and a reference letter from the field practicum faculty. Applicants who meet these criteria will be scheduled for a structured on-campus interview, which includes a written case assessment.

Admission decisions will be based on application materials and faculty/administrative evaluation of applicant performance on the structured interview and written case assessment.

#### Transfer admits

Applicants transferring from other CSWE-accredited M.S.W. programs must submit course syllabi, field practicum evaluations and a Statement of Good Standing from the dean or director of the program from which the student is transferring. These materials must be submitted in addition to the required application form, transcripts, personal statement, resume and reference letters. No more than 30 semester credits will be accepted in transfer, and transfer credit will be awarded in accordance with university policies governing transfer credit and time limits for degree completion.

Applicants from non-social work graduate programs must submit course syllabi for transfer evaluation. A maximum of six semester credits of elective course work may be accepted in transfer from non-social work graduate programs in accordance with university policies governing transfer credit and time limits for degree completion. No course credit is given for life or work experience.

#### Course waiver information for new M.S.W. students

Students may request to be waived from courses in the M.S.W. program if they can demonstrate they have satisfactorily completed the equivalent courses. Students must present evidence of content equivalency to the M.S.W. program director and have earned an "A" or "B" grade in the courses that are the basis for the waiver request; these courses must have been completed within the last five years. A portfolio process is used to assess equivalency. Graduate students from non-M.S.W. programs, from B.S.W. programs but not in the Advanced Standing Program, and from B.A., B.S. or other undergraduate programs may be waived from no more than three foundation courses:

SLWK 609 Foundations of Research in Social Work Practice  
SLWK 601 and 610 Human Behavior in the Social Environment I and II

The course waiver does not result in award of credit. Credit may be awarded only through transfer of graduate courses (see Transfer Policy). Students who are granted waivers but not transfer credits must take elective courses to fulfill the number of credits that have been waived.

Students interested in pursuing a waiver for one or more of the specified foundation courses should contact the M.S.W. Program Office to request the Equivalency Portfolio Form(s) and instructions. Additional information concerning course waivers is available online:  
<http://www.vcu.edu/slwwweb/admissions/msw.html>.

#### Special admits

Special admission may be granted to applicants whose GPA does not meet the minimum requirements, but who have strong practice-related experience and other exceptional qualifications. Although the GRE is not required, applicants may submit GRE scores or transcripts reflecting graduate course work completed to provide information on their capability for graduate study. Applicants admitted as provisional students (with GPAs below 2.7) must complete the first 12 credits in the program with a GPA of 3.0 or better and meet with their adviser at least three times during their first semester in the program.

#### Degree requirements

The regular standing M.S.W. degree requires the completion of 60 credits of graduate study (two years of full-time study). The first 30 credits may be taken in one academic year on a full-time basis or may be extended to a maximum of two years in the structured part-time program in Richmond and Northern Virginia. Students select an area of concentration for the last



30 credits, which can be completed in one academic year on a full-time basis or extended to a maximum of two years in the structured part-time program. Students are usually in a field instruction practicum two days each week during the foundation curriculum and three days each week during the concentration curriculum. Students must complete all required course work for the M.S.W. degree; however, modifications to the structure of the curriculum can be made for students with special learning needs.

Course credit for work or life experience is not granted in lieu of M.S.W. course credits.

## M.S.W. curriculum

The purpose of the Master of Social Work Program is to prepare graduate-level social workers with mastery of the knowledge, values and skills essential for advanced social work practice in a multicultural society. The school accomplishes this purpose through its full- and part-time programs of study for the M.S.W. degree in its on- and off-campus locations. The objectives of the M.S.W. Program are to:

- provide a foundation curriculum of the knowledge, skills, ethics and values essential for work with individuals, families, groups, communities and organizations,
- provide a concentration curriculum preparing students for advanced practice in either clinical social work practice or social work administration, planning and policy practice in a range of settings,
- promote students' adherence to and application of the profession's values and ethical principles,
- promote students' understanding of the implications of diversity by educating them to identify cultural strengths and counteract individual and institutional prejudice, oppression and discrimination,
- enable students to use research methods to analyze and critically evaluate professional practice, programs and service delivery systems,
- promote students' understanding of advocacy and involvement in advocacy to effect social and economic justice, and
- provide a learning environment that instills in students a commitment to continued learning and self-critical practice.

### The foundation

The foundation curriculum comprises the first 30 credits of the M.S.W. program. The purpose of the foundation practice, in laying the groundwork for concentration study, is to develop the knowledge and skill base necessary to apply and carry out core competencies (relationship building, problem identification, assessment, selecting and planning interventions, implementation, and evaluation) with individuals, families, groups, communities and organizations. Foundation practice emphasizes critical thinking, client strengths, commitment to social work values and ethical principles, self-awareness, professional development, evidence-based decision making, multicultural competency, and social and economic justice. The foundation curriculum includes courses in social work practice, human behavior, social policy, social justice, research and field instruction.

### Concentration options

After completion of the foundation year of study, M.S.W. students choose an advanced concentration in either clinical social work practice or social

work administration, planning and policy practice. The concentration curriculum prepares graduates for active roles in practice and program evaluation and in the generation of knowledge for future practice, programs and policy.

Both concentration options are available in Richmond and the clinical concentration is available at the Northern Virginia off-campus site. Northern Virginia students can complete the SWAPP concentration by attending classes one to two days a week in Richmond with a field agency placement in the greater D.C. area.

### Clinical social work practice concentration

Clinical social work practice involves a mutual problem-solving process in which multidimensional assessment, goal setting, planned intervention and evaluation are prominent components, all of which are informed by current scientific knowledge. All clinical practice is grounded in the values and purposes of the social work profession. The goal of clinical social work is to promote effective coping with life challenges and transitions. This is achieved by helping people solve problems, change dysfunctional behavior, resolve emotional and interpersonal conflicts, develop and use social networks and resources and maintain achieved capacities and strengths. This goal rests on the fundamental belief in the dignity of all human beings and in communal responsibility for all members of the multicultural society.

Clinical social work practice takes place in the context of a purposeful relationship. The conscious use of the professional self is central in building and maintaining such relationships. Interventions may involve therapeutic, supportive, educational and resource management activities. These interventions are based on a process of strengthening and reordering of organizational structures in the lives of clients: intrapersonal (including intrapsychic), interpersonal, institutional and/or social.

### SWAPP concentration

The Social Work Administration, Planning and Policy Practice concentration prepares graduates to become leaders skilled in analyzing, formulating, implementing and evaluating policies, plans and programs. The knowledge, values and skills that are taught emphasize current theory and research through classroom and field-based experiences. Practice takes place in the context of a complex, changing environment in which communities and governmental, legislative, nonprofit and for-profit organizations advocate for, plan, and deliver social services and advocate for social change. The major themes within the integrated curriculum are social and economic justice, diversity, leadership, and advocacy.

### Field instruction

Field instruction courses are an integral part of the curriculum of the School of Social Work. Academic credit is awarded for field instruction hours completed in a community agency under professional supervision. In the first field placement, students are expected to demonstrate in practice the professional knowledge, values and skills studied in the total foundation curriculum.

In the concentration component of the curriculum, students are placed in agencies according to their chosen concentration (clinical social work practice or social work planning and administrative practice) and their career interests. Examples of such agencies are: public social services, community mental health centers, hospitals, substance abuse treatment programs, schools, family and children's services, and correctional facilities.

Part-time students planning to take either foundation or concentration field instruction (two semester or block option) must request placement in writing one full semester prior to the semester or summer in which they plan to begin field instruction. Such requests are to be addressed to the director of field instruction. Only one placement (foundation or concentration) may be taken in a block and the block placement option is typically only for students in the structured part-time program. Exceptions are sometimes granted for students with special learning needs.

Field instruction placements are generally available throughout Virginia, Washington, D.C. and in some neighboring states. Students residing in a community outside of Richmond may request field placement in their home community. Granting of the request depends on availability of appropriate resources. Students are, however, placed in agencies for field instruction primarily on the basis of curriculum requirements. Therefore, a number of students usually are placed in agencies a distance from Richmond (or their residence). Access to a car is essential and arrangements for travel must be made by students at their own expense.

Students may propose to complete one of their two field placements in their social work agency of employment. The proposal form may be obtained from the Field Department Office and the plan must meet the school's educational requirements. This option is not available to Advanced Standing Program students who complete only one field placement during their three semesters in the program.

Credit for work or life experience is not granted in lieu of field instruction course credits.

#### **Structured part-time study for the Master of Social Work degree**

The school offers a structured part-time program leading to the M.S.W. degree on the Richmond campus and at its off-campus site in Northern Virginia. Students applying for the structured part-time program must: meet the same criteria for admission as full-time students; be admitted to the university prior to enrolling in any courses in the structured part-time program; and begin the program in the fall semester only. Students in the structured part-time program also must complete six credits each fall and spring semester and are expected to complete all requirements for the degree within a four-year period, making full-time work very difficult. The structured part-time program cannot be completed entirely in night or weekend study, given field practicum requirements and the scheduling of some courses. With the exception of the field practicum, foundation courses required in the structured part-time program are available in the evening (4 and 7 p.m. classes). Students may take the concentration curriculum (last 30 credits) on a structured part-time or full-time basis at the Northern Virginia off-campus site or on campus in Richmond.

#### **Curriculum exceptions**

Students must complete all required course work for the M.S.W. degree; however, modifications to the structure of the curriculum may be requested by students with special learning needs. VCU has an Office of Services for Students with Disabilities. They work with students to determine academic adjustments that may be needed. They can be reached by calling (804) 828-2253 (VTDD). Students with disabilities also may call the director of student services in the School of Social Work, (804) 828-0703, to discuss their particular learning needs. The director of student services in the School of Social Work works with these students to determine potential curriculum options.

#### **Academic status**

A minimum GPA of 3.0 ("B") on a 4.0 scale over the entire period of study, a minimum of 60 credits in the two-year and part-time options, or 39 credits

in the Advanced Standing Program, demonstrated ability in social work practice and acceptable professional behavior are required for graduation with a Master of Social Work degree.

Students must achieve a GPA of 3.0 or higher in the required foundation courses, exclusive of field instruction practicum, in order to continue into concentration study.

A student whose cumulative GPA is less than 3.0 at any point in the program after completion of the first 12 credits will be dropped from the program.

A student who receives any grade of "D" or "F" will be dropped automatically from the program without regard to GPA.

A student who earns a grade of "C" or below in more than six credits, exclusive of field instruction, will be dropped automatically and immediately from the program without regard to GPA.

Field practicum performance is graded on a pass/fail basis. The student must receive a grade of pass to continue in the program. The student who receives a grade of fail in the field practicum is dropped automatically and immediately from the program without regard to GPA.

A student who is dropped from the Master of Social Work program may petition the dean of the School of Social Work in writing for readmission to the program after a minimum absence of two semesters; readmission is not guaranteed. A student may be readmitted only once.

#### **M.S.W course requirements**

All students complete the same course requirements for the foundation curriculum prior to entering concentration courses. Concentration study varies according to the student's choice of method.

#### **Two-year program**

##### **Foundation**

##### **First year, fall semester**

	credits
SLWK 601 Human Behavior in the Social Environment I	3
SLWK 602 Policy, Community and Organizational Practice I	3
SLWK 603 Social Work and Social Justice	3
SLWK 604 Social Work Practice with Individuals, Families and Groups I	3
SLWK 693 Foundation Field Instruction I	3
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##### **First year, spring semester**

SLWK 605 Social Work Practice with Individuals, Families and Groups II	3
SLWK 606 Policy, Community and Organizational Practice II	3
SLWK 609 Foundations of Research in Social Work Practice	3
SLWK 610 Human Behavior in the Social Environment II	3
SLWK 694 Foundation Field Instruction II	3
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##### **Clinical concentration**

##### **Second year, fall semester**

SLWK 703 Mental, Emotional and Behavioral Disorders	3
SLWK 704 Clinical Social Work Practice I	3
SLWK 706 Research for Clinical Social Work Practice I	3
SLWK 793 Concentration Field Instruction	3
Elective	3

15

**Second year, spring semester**

SLWK 705 Clinical Social Work Practice II	3
SLWK 707 Research for Clinical Social Work Practice II	3
SLWK 710 Concentration Social Policy	3
SLWK 794 Concentration Field Instruction	3
Elective	3

15

**Administration, planning and policy practice concentration****Second year, fall semester**

SLWK 712 Social Work Planning and Administrative Practice I	3
SLWK 714 Research for Social Work Administration, Planning and Policy Practice I	3
SLWK 716 Concentration Social Policy for Social Work Administration, Planning and Policy Practice	3
SLWK 793 Concentration Field Instruction	3
Elective	3

15

**Second year, spring semester**

SLWK 711 Strategies for Social Work Planning and Administrative Practice	3
SLWK 713 Social Work Planning and Administrative Practice II	3
SLWK 715 Research for Social Work Administration, Planning and Policy Practice II	3
SLWK 794 Concentration Field Instruction	3
Elective	3

15

Information on the required sequencing of courses for the Structured Part-time Program is available at [www.vcu.edu/slwwweb](http://www.vcu.edu/slwwweb)

**Special M.S.W. options**

Study in the M.S.W. program combined with study in other programs or subjects can lead to students earning special certificates or additional degrees. Options are offered for a certificate in aging, for gender violence intervention, for school social work certification, for a certificate in interdisciplinary early childhood intervention, for a nonprofit management certificate, for dual degree study in law or public health, and for dual degree study in divinity or Christian education. Dual degree options are available only in Richmond.

### **Combined Master of Social Work (M.S.W.) and Certificate in Aging Studies (Post-baccalaureate graduate certificate)**

**Admission requirements summary****Combined Master of Social Work (M.S.W.) and Certificate in Aging Studies (Post-baccalaureate graduate certificate)**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.W.	<b>Regular Standing</b> Full-time – Fall Part-time – Fall	Feb 1 Feb 1	
	<b>Advanced Standing</b> Summer only – Richmond campus	Dec 1	

**Special requirements:**

If applying for off-campus program for concentration year, indicate location in item 5 on application

See Social Work [Web site](#) for supplemental academic information form.

The School of Social Work in cooperation with the Department of Gerontology of the School of Allied Health Professions of VCU provides students with a unique educational opportunity in social work and gerontology. Master of Social Work students interested in work with the elderly or in gerontological programs may earn a Certificate in Aging Studies while completing the master's degree requirements.

Students must meet the admission requirements of the Master of Social Work program of the School of Social Work and of the Certificate in Aging Studies program in the Department of Gerontology, School of Allied Health Professions. Admission into one program does not guarantee admission into the other. In order to meet the requirements of the M.S.W. degree and the Certificate in Aging Studies, students complete a total of 65 graduate credits. All foundation and specialization courses of the Master of Social Work Program are completed, and core courses (nine credits) of the Certificate in Aging Studies Program are completed. Other requirements are met by (1) completion of M.S.W. research credits in which students undertake a project focused on aging, (2) completion of second-year field instruction practicum requirements (six credits) in a social work setting related to aging, (3) completion of an independent study course in gerontology, which integrates research and practicum courses.

Additional information may be obtained from either of the following offices:

**Department of Gerontology  
School of Allied Health Professions**

[www.sahp.vcu.edu](http://www.sahp.vcu.edu)

Virginia Commonwealth University

P.O. Box 980228

Richmond, VA 23298-0228

Attention: M.S.W.-Gerontology Certificate Adviser

**School of Social Work**

[www.vcu.edu/slwwweb](http://www.vcu.edu/slwwweb)

Virginia Commonwealth University

1001 W. Franklin St.

Richmond, VA 23284-2027

Attention: M.S.W.-Gerontology Certificate Adviser

	credits
GRTY 601 Biological and Physiological Aging	3
GRTY 602 Psychology of Aging	3
GRTY 605 Social Gerontology	3
GRTY 692 Independent Study in Gerontology	2
	6

SLWK 706 and 707 Research for Clinical Social Work Practice I and II or

SLWK 714 and 715 Research for Social Work Administration, Planning and Policy I and II

SLWK 793-794 Concentration Field Instruction or SLWK 795 Concentration Block Field Instruction	6
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23

### **Combined Master of Social Work (M.S.W.) and Certificate in Gender Violence Intervention (Post-baccalaureate graduate certificate)**

**Admission requirements summary**

**Combined Master of Social Work (M.S.W.) and Certificate in Gender Violence Intervention (Post-baccalaureate graduate certificate)**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.W.	<b>Regular Standing</b> Full-time – Fall Part-time – Fall	Feb 1 Feb 1	
	<b>Advanced Standing</b> Summer only – Richmond campus	Dec 1	

**Special requirements:**

If applying for off-campus program for concentration year, indicate location in item 5 on application

See Social Work [Web site](#) for supplemental academic information form.

The certificate in Gender Violence Intervention is a collaborative effort between the Department of Sociology and other departments and programs at VCU, as well as community advocates working in the area of sexual and domestic violence. The certificate requires a total of 18 credit hours comprised of five required courses in the Department of Sociology and one elective.

Through a cooperative arrangement with VCU's Department of Sociology, M.S.W. students may simultaneously earn this graduate certificate by completing two certificate-specific courses that also satisfy the elective requirements in the M.S.W. program: SOCY 510 Sexual and Domestic Violence in Social Context and SOCY 635 Theorizing Gender Violence. M.S.W. courses satisfy the other certificate requirements as follows:

Certificate requirement	Satisfied by M.S.W. requirement
SOCY 593 Internship in Sexual and Domestic Violence Practice and Research	SLWK 693-694, 695 or 793-794, 795: a social work field practicum (6 credits) in an agency providing sexual or domestic violence services
SOCY 601 Advanced Methods of Social Research	SLWK 706 and 707 or 714 and 715: clinical or social work planning administrative and policy practice research course (6 credits)
PADM 650 Principles of Nonprofit Management	SLWK 602 and SLWK 606 Policy, Community and Organizational Practice I and II (6 credits)

Students must meet the admission requirements of the Master of Social Work program of the School of Social Work and the Certificate in Gender Violence Intervention in the Department of Sociology.

Additional information may be obtained from the School of Social Work Web site at [www.vcu.edu/slwwb](http://www.vcu.edu/slwwb) or by writing:

School of Social Work  
Virginia Commonwealth University  
1001 West Franklin Street  
P.O.Box 842027  
Richmond, Virginia 23284-2027  
Attention: M.S.W.-Gender Violence Intervention Certificate Adviser

**Combined Master of Social Work (M.S.W.) and Certificate in Interdisciplinary Early Childhood Intervention****Admission requirements summary****Combined Master of Social Work (M.S.W.) and Certificate in Interdisciplinary Early Childhood Intervention**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.W.	<b>Regular Standing</b> Full-time – Fall Part-time – Fall	Feb 1 Feb 1	
	<b>Advanced Standing</b> Summer only – Richmond campus	Dec 1	

**Special requirements:**

If applying for off-campus program for concentration year, indicate location in item 5 on application

See Social Work [Web site](#) for supplemental academic information form.

This is a 10- to 13-credit competency-based certificate that is offered by the Partnership for People with Disabilities – Project Uplink and the schools of Allied Health Professions, Education, Nursing, Social Work and the Department of Psychology in the College of Humanities and Sciences. Built on a strong base of advanced professional course and clinical work, students will be prepared to intervene with families and their children under the age of five who are at risk or have been identified with developmental delays.

In this certificate program M.S.W. students complete 60 credit hours of course work, including specialized courses in interdisciplinary work. The certificate requires that students complete a clinical concentration practicum placement in an approved infant/early childhood field site. The course offerings and practicum are taken during concentration study in the master's program. Interdisciplinary seminars provide opportunities for students to work with care providers in the helping disciplines to promote communication, coordination, advocacy and referral activities.

Additional information may be obtained from the School of Social Work Web site at [www.vcu.edu/slwwb](http://www.vcu.edu/slwwb) or by writing:

**School of Social Work**

Virginia Commonwealth University  
1001 W. Franklin St.  
Richmond, VA 23284-2027  
Attention: Early Childhood Intervention Certificate Adviser

**Combined Master of Social Work (M.S.W.) and Certificate in Nonprofit Management (Post-baccalaureate graduate certificate)****Admission requirements summary****Combined Master of Social Work (M.S.W.) and Certificate in Nonprofit Management (Post-baccalaureate graduate certificate)**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.W.	<b>Regular Standing</b> Full-time – Fall Part-time – Fall	Feb 1 Feb 1	
	<b>Advanced Standing</b> Summer only – Richmond campus	Dec 1	

**Special requirements:**

If applying for off-campus program for concentration year, indicate location in item 5 on application

See Social Work Web site for supplemental academic information form.

Students seeking a Master of Social Work may pursue a Certificate in Nonprofit Management through Virginia Commonwealth University's L.

Douglas Wilder School of Government and Public Affairs.

Through a cooperative arrangement with the L. Douglas Wilder School of Government and Public Affairs, M.S.W. students pursuing the Social Work Administration, Planning and Policy Practice (SWAPPP) concentration may simultaneously earn the graduate certificate in nonprofit management offered by the L. Douglas Wilder School of Government and Public Affairs.

### Certificate requirements for M.S.W. students

Social work SWAPPP concentration students are required to complete three nonprofit courses: PADM 656 Fund Development for the Nonprofit Sector (fall course); PADM 659 Financial Management for Nonprofit Organizations (spring course); and PADM 661 Nonprofit Law, Governance and Ethics (summer course) in the L. Douglas Wilder School of Government and Public Affairs.

Two social work SWAPPP courses are substituted for six credit hours of the certificate's 15 credit hour requirement. One of these courses is SLWK 712 Social Work Planning and Administrative Practice I. The second course can be SLWK 711 Strategies for Social Work Planning and Administrative Practice or SLWK 713 Social Work Planning and Administrative Practice II.

M.S.W. clinical concentration students must complete 15 course credits in nonprofit management. Six of the PADM nonprofit credits will satisfy the M.S.W. elective requirement for either concentration.

### Application process

To earn the Certificate in Nonprofit Management simultaneously with the M.S.W., it is necessary to complete a graduate school application for the certificate program; however, no supporting information or fees are required for students who are already enrolled in good standing in the social work master's degree program.

Additional information may be obtained from the School of Social Work Web site at: [www.vcu.edu/slwwweb](http://www.vcu.edu/slwwweb) or by writing:

**School of Social Work**  
Virginia Commonwealth University  
1001 West Franklin Street  
Richmond, Virginia 23284-2027  
Attention: Certificate in Nonprofit Management Adviser

Detailed information about the Certificate in Nonprofit Management can be obtained from Dr. Janet Hutchinson, associate professor and director of the Master of Public Administration program, (804) 828-8041 or e-mail: [jhutch@vcu.edu](mailto:jhutch@vcu.edu).

### Combined Master of Social Work (M.S.W.) and Certification for School Social Work Practice

#### Admission requirements summary

**Combined Master of Social Work (M.S.W.) and Certification for School Social Work Practice**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.W.	<b>Regular Standing</b> Full-time – Fall Part-time – Fall	Feb 1 Feb 1	
	<b>Advanced Standing</b> Summer only – Richmond campus	Dec 1	

#### Special requirements:

If applying for off-campus program for concentration year, indicate location in item 5 on application

See Social Work [Web site](#) for supplemental academic information form.

Through a collaborative program with the VCU School of Education, students may meet Virginia Department of Education standards for certification as school social workers in Virginia in addition to meeting requirements for the M.S.W. degree. Students interested in certification in school social work should contact their adviser during the first semester of their program. In order to meet the requirements of the M.S.W. degree and the School Social Work certification option, students complete a total of 63 graduate credits including six credit hours of approved graduate courses in education.

Additional information may be obtained from the School of Social Work Web site at [www.vcu.edu/slwwweb](http://www.vcu.edu/slwwweb) or by writing:

**School of Social Work**  
Virginia Commonwealth University  
1001 W. Franklin St.  
Richmond, VA 23284-2027  
Attention: Certificate for School Social Work Adviser

### Combined Master of Social Work (M.S.W.) and Juris Doctor (J.D.)

#### Admission requirements summary

##### Combined Master of Social Work (M.S.W.) and Juris Doctor (J.D.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.W.	<b>Regular Standing</b> Full-time – Fall Part-time – Fall	Feb 1 Feb 1	
	<b>Advanced Standing</b> Summer only – Richmond campus	Dec 1	

#### Special requirements:

If applying for off-campus program for concentration year, indicate location in item 5 on application

See Social Work [Web site](#) for supplemental academic information form.

Through a cooperative arrangement with the T. C. Williams Law School, selected students in either school may pursue a combined four-year curriculum of graduate study leading to the degrees of Master of Social Work and Juris Doctor. The program is established in recognition of the role of public law in social and economic life. The dual degree program prepares professionals versed in the values, knowledge and skills of both fields, bringing an integrated base of competency to the resolution of human and social problems.

Applicants must successfully meet the admission requirements of both schools and upon admission are assigned an adviser in each school. Students in dual degree study may begin the course work in either school,



with the sequence of courses being determined by the point of entry.

The time normally required for completion of the integrated four-year curriculum is one academic year less than if each degree were taken separately. Elective courses will enable students to select areas in law and in social work which meet their particular interests. Application for admission must be made to each institution separately. Those interested should write both the Admissions Office of the T. C. Williams Law School, University of Richmond, VA 23173 and the Graduate School, Virginia Commonwealth University, Richmond, VA 23298-0568.

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### **Combined Master of Social Work (M.S.W.) and Master of Arts in Christian Education (M.A.)**

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#### **Cooperative program with Union Theological Seminary and the Presbyterian School of Christian Education (Union-PSCE)**

This program has been developed to prepare social workers for service in church-related social services and institutions, for planning and working in inner city settings, and for other ministries. Counseling, group work and educational skills are components of both programs.

This program requires three continuous years of study and leads to a Master of Arts degree conferred by the Union Theological Seminary and Presbyterian School of Christian Education, and a Master of Social Work degree from VCU. Typically, a student completes the first year at Union-PSCE, followed by two years at the VCU School of Social Work. In the final semester at VCU, students complete an integrative seminar at Union-PSCE. Both degrees are awarded at the end of the three years of study.

Application for admission must be made to each institution separately. Those interested should write both the Graduate School, Virginia Commonwealth University, Richmond, VA 23284-3051, and Director of Admissions, Union-PSCE, 1205 Palmyra Ave., Richmond, VA 23227.

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### **Combined Master of Social Work (M.S.W.) and Master of Divinity (M.Div.)**

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This four-year professional degree program is offered by Virginia Commonwealth University in cooperation with Richmond Theological Consortium schools that include Union-Presbyterian School of Christian Education, Baptist Theological Seminary at Richmond, and Samuel DeWitt Proctor School of Theology at Virginia Union University. The purpose of the dual degree program is to prepare students for service in occupations where social work and the church's ministries intersect; to enable social workers to perform and evaluate social work practices as they relate to biblical, theological, ethical, educational and pastoral perspectives; and equip graduates for various forms of ministry in which clinical and administrative skills in social work are critical.

This program requires four continuous years of study and leads to a Master of Social Work degree conferred by VCU and a Master of Divinity degree conferred by Union-PSCE, BTSR or STVU. Permission for part-time study must be given by the dual degree adviser at VCU and the appropriate theological school dean of faculty. All degree requirements must be completed within seven years of matriculation. Students can apply simultaneously to both programs and begin study at either institution following the approved curriculum plan; or, a student may begin at either VCU or the seminary and then apply for admission to the other school during the first year of study in accordance with application deadline dates.

The M.S.W. requires 60 credits that include the required integrating seminar and one course transferred from the seminary to satisfy a

three-credit M.S.W. elective requirement. The integrative seminar is taken in the final year of study and is co-taught by a member of the VCU School of Social Work faculty and a member of a faculty of an RTC school. The seminar enables the student to integrate theoretical, social justice, empirical, ethical and practical dimensions of social work with the biblical, theological, educational and pastoral perspectives.

Prospective students apply to the VCU School of Social Work and one of the participating theological schools, must meet both sets of admission standards, and be accepted into both programs. For the M.S.W. program, refer to the "[Admission to the master's degree program](#)" section. For information about admission to an RTC master of divinity program, contact one of the following schools:

Baptist Theological Seminary at Richmond  
3400 Brook Road  
Richmond, VA 23286-3446  
Telephone: (804) 345-BTSR (2877)

Samuel DeWitt Proctor School of Theology  
1500 N. Lombardy St.  
Richmond, VA 23220  
Telephone: (804) 257-5715

Union Theological Seminary and Presbyterian School of Christian Education  
3401 Brook Road  
Richmond, VA 23227  
Telephone: (804) 278-4230  
Toll free: (800) 229-2990

For information about the M.S.W./M.Div. program, contact the associate dean for student and academic affairs, 1001 W. Franklin St., Richmond, VA 23284-2027; (804) 828-0408. M.S.W. program applications can be obtained from the VCU Graduate School Web site at <http://www.vcu.edu/graduate/ps/admission.html>.

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### **Combined Master of Social Work (M.S.W.) and Master of Public Health (M.P.H.)**

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#### **Admission requirements summary**

#### **Combined Master of Social Work (M.S.W.) and Master of Public Health (M.P.H.)**

##### **Public Health, Master of (M.P.H.)**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.P.H.	Fall	Priority given to applications received by Apr 1 Applications reviewed on a rolling basis until class is filled	GRE

##### **Special requirements:**

Students applying to joint M.D./M.P.H. program should be accepted to the VCU School of Medicine prior to applying to the M.D./M.P.H. program

MCAT or DAT acceptable in lieu of GRE for combined professional/academic degree programs

##### **Social Work, Master of (M.S.W.)**

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S.W.	<b>Regular Standing</b>		
	Full-time – Fall	Feb 1	
	Part-time – Fall	Feb 1	
	<b>Advanced Standing</b>		
	Summer only – Richmond campus	Dec 1	

**Special requirements:**

If applying for off-campus program for concentration year, indicate location in item 5 on application

See Social Work [Web site](#) for supplemental academic information form.

Through a collaborative program between the VCU School of Social Work and the School of Public Health, students complete a three-year full-time program of study, including some summer course work, to obtain the Master of Social Work and Master of Public Health degrees. The purpose of this dual-degree program is to prepare graduates to work with individuals, families, groups, communities and/or organizations; advocate

for social, health care and economic justice in a diverse and multicultural society; and promote physical and mental health across the life course.

Prospective students apply separately to both programs through the Graduate School. Once admitted to both programs, the student is assigned an adviser from each to develop a plan of study, typically starting with the M.S.W. course work. Students who begin one of the degree programs may also apply to the other during the first year of study. If admitted, an individualized program of study is developed and approved by both program directors.

Students are required to complete a minimum of 45 M.S.W. credits and a minimum of 33 M.P.H. credits, for a total of 78 semester credit hours. During the third and last year of study, the dual-degree students are placed in internships through the School of Social Work that focus on public health; the program is approved by both the M.P.H. program director and the director of social work field instruction. A final research project that examines a relevant public health topic is required for the M.P.H.



# VCU Life Sciences

VCU entered a new era when it implemented, as one of its highest priorities, a new university-wide matrix academic organization called VCU Life Sciences, created in response to the need to prepare students for the anticipated growth in new life sciences jobs in the coming decades. The skills identified for these jobs require highly interdisciplinary or multidisciplinary approaches, often falling between the boundaries of traditional academic disciplines. The way that the life sciences are understood and taught is likely to be fundamentally different, with increasing emphasis on systems biosciences as an important complement to more traditional, purely reductive approaches. The objective of Phase II of VCU's strategic plan specifically outlines the need to bring VCU's major academic and administrative divisions together to work on mutual initiatives that will accomplish VCU's goal of national leadership. VCU Life Sciences is a response to that objective.

## Administration

1000 W. Cary St.  
P.O. Box 842030  
Richmond, VA 23284-2030  
(804) 827-5600  
Fax (804) 828-1961  
<http://www.vcu.edu/lifesci>

### Thomas F. Huff

Vice Provost for Life Sciences

### Gregory A. Buck

Director of the B.S.-Master's and Master's Programs in Bioinformatics and Director of the Center for the Study of Biological Complexity

### Gregory C. Garman

Director of the B.S.-Master's and Master's Programs in Environmental Studies and Director of the Center for Environmental Studies

### Robert M. Tombes

Director of the Ph.D. Program in Integrative Life Sciences

## Faculty

VCU Life Sciences faculty members are drawn from departments across the university. Lists of participating faculty and academic affiliations are available on the [VCU Life Sciences Web site](#) for each program.

## Facilities

VCU Life Sciences comprises the resources and interests not only of the Monroe Park Campus and the VCU Medical Center, but also the [Virginia BioTechnology Research Park](#) and the [Inger and Walter Rice Center for Environmental Life Sciences](#), a property of 342 acres overlooking the James River in Charles City County. The \$27 million Eugene P. and Lois E. Trani Center for Life Sciences houses the administrative offices, the two research centers described below, state-of-the-art laboratories and classrooms, and a climate controlled greenhouse.

VCU Life Sciences supports two university centers for its research and teaching efforts: the [Center for Environmental Studies](#) and the [Center for the Study of Biological Complexity](#).

## Transfer credit

Graduate-level course work completed prior to matriculation into the program, including course work taken in another program at VCU or at another institution, shall be evaluated to determine whether it can be used to fulfill degree requirements of this program. There is no limit to the number of credits that can be transferred from another program at VCU as long as they have not been previously applied toward another degree. A maximum of six credit hours earned at an institution other than VCU can

be accepted for transfer into the program if not previously applied toward another degree. A minimum grade of "B" is required for transfer of credits.

## Grade requirements

Degree candidates must maintain a GPA of 3.0 or greater. GPAs shall be based on all graduate courses attempted after acceptance into the program. The academic standing of any student who receives multiple grades of "C," or a grade of "D" or "F" will be reviewed for possible termination from the program.

## Integrative Life Sciences, Doctor of Philosophy (Ph.D.)

### Admission requirements summary

#### Integrative Life Sciences, Doctor of Philosophy (Ph.D.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
Ph.D.	Fall (preferred) Spring Summer	Feb 1	GRE

Special requirements:

See program [Web site](#)

The Ph.D. in Integrative Life Sciences is designed for students who want to conduct research that is integrative across multiple disciplines and that takes a systems approach to emerging research questions across the many fields that comprise the life sciences. Students may opt to work with faculty members from departments on both campuses. The program provides the opportunity to conduct interdisciplinary research at multiple scales of study from the molecular to ecosystem levels with an emphasis on the concepts of systems biology and biological complexity.

### Admission requirements, procedures and financial aid

The purpose of the admission requirements for the Ph.D. program is to ensure selection of outstanding students whose motivation, ability and education prepare them for interdisciplinary graduate study in the life sciences. The following requirements and procedures incorporate those of the [VCU Graduate School](#).

1. Admission requirements
  1. Graduation from an accredited college or university or its equivalent, with a degree in a discipline, a spectrum of course work, and/or professional experience that provides an appropriate background for graduate-level study in the life sciences.
  2. An undergraduate or graduate record indicating superior performance. Applicants must have a minimum GPA of 3.0 on a 4.0 scale for at least the last 60 credits of undergraduate work or for a completed graduate degree. In very unusual cases, this requirement may be waived by approval of the dean of the Graduate School.
  3. Satisfactory scores on the Graduate Record Examination. Scores for appropriate advanced tests, in particular biology, chemistry or molecular biology/biochemistry, are recommended.
  4. For applicants whose native language is not English, satisfactory scores from a standardized test commonly used and deemed appropriate for evaluation of English language proficiency, such

as the TOEFL.

5. Letters of recommendation from three present or former instructors or other individuals qualified to evaluate the applicant's ability to engage in graduate study in the life sciences.
  6. A written statement describing the applicant's interests, motivation, education and goals for pursuing graduate study in the life sciences.
2. Admission procedure
    1. The above material must be sent along with a completed application form and the required application fee to the Graduate School, Virginia Commonwealth University, Richmond, VA 23284-3051. Application forms and further information can be found on the Graduate School's Web page at <http://www.vcu.edu/graduate>.
    2. Applicants may apply for admission to begin studies any semester of the year, but fall admission is recommended. Admission to graduate study in integrative life sciences requires majority approval and recommendation by the Graduate Program Committee and acceptance by the vice provost for Life Sciences and the dean of the Graduate School.
  3. Types of admission
    1. Degree-seeking student: An applicant who meets all requirements for admission to the program.
    2. Provisional student: An applicant who has not fully met the requirements of the program but shows exceptional promise. Applicants with outstanding potential but who lack courses or training in specific areas deemed necessary for success in the program may be required to complete specific course work. Provisionally accepted students must remove all conditions of the provisional admission within one year of enrollment. Failure to meet these conditions will result in the student being dismissed from the program. No prerequisite courses taken as a provisional student may be applied toward the graduate degree.
  4. Financial aid. In addition to need-based financial aid awarded through the Office of Financial Aid, students may be eligible to be considered for a variety of scholarships, fellowships, and teaching and research assistantships. Information regarding available financial support will accompany an offer of acceptance.

## Degree requirements

Students are required to complete course work in core and elective courses and to conduct significant research. All work toward the degree must be completed within seven years of the first enrollment.

1. **Credit requirements.** Students in the program are required to earn a minimum of 64 hours of graduate-level credits. At least one-half of the credit hours presented for graduation must be at the 600 level or higher.
2. **Grade requirement.** Degree applicants must achieve an overall GPA of 3.0 ("B") with a grade of "C" in no more than two courses. The GPA for graduation is based on all graduate courses attempted after acceptance into the program.
3. **Transfer and M.S. credits.** Graduate-level course work taken in another program at VCU or at another institution, shall be evaluated to

determine whether it can be used to fulfill degree requirements of this program. There is no limit to the number of credits that can be transferred from another program at VCU as long as they have not been previously applied toward another degree. A maximum of six credits earned at another institution can be accepted for transfer into the program if not previously applied toward another degree. A minimum grade of "B" is required for credits transferred.

4. **Research adviser and committee.** New students entering the program may be initially advised by an advisory committee of faculty members to assist students with initial course selection and to provide advice concerning the program. Students should select a research adviser prior to their third semester of study. The research adviser may be chosen from among the many graduate faculty members associated with this program from either campus.

Students are required to form a research advisory committee that is headed by the research adviser and consists of a minimum of five members of the VCU graduate faculty. Individuals who are not graduate faculty members (i.e. individuals from another institution or industry) must apply to the dean of the Graduate School for temporary membership. The significant areas of the student's research focus should be represented by the members of the research advisory committee. At least two members of the committee shall be from departments other than that of the research adviser, with one of those members being integrally associated with the student's research to foster the interdisciplinary intent of this degree program. Students should form their committee no later than the end of their third semester of study.

5. **Written and oral examinations.** Before admission to candidacy for the Ph.D. degree, students must successfully complete a comprehensive written examination and an oral examination. The student's research advisory committee will administer both exams. Students should take the written exam upon completion of all required didactic course work. It will focus on material covered in core and selected elective courses as well as fundamental knowledge relevant to the student's research field. Upon successful completion of the written examination and submission and acceptance of a research proposal, students should take an oral examination that includes a defense of the proposed research project and other subject areas deemed appropriate by the committee. Students may retake the written and oral examinations only once.
6. **Dissertation research.** The dissertation research project should represent a significant contribution to the body of knowledge in its field and should be deemed suitable for publication in refereed journals. The emphasis of the research conducted by students in this program should be on interdisciplinary research, incorporating two or more disciplines and with a systems approach. Research projects may take advantage of the many research opportunities across the life sciences on both campuses. Projects may encompass multiple scales of study from molecular to ecosystem levels. Students shall prepare a written dissertation describing the completed research using the format approved by the Graduate School. An oral defense of the dissertation, under the direction of the research advisory committee and open to all faculty members, also is required. Upon successful completion of all degree requirements, students will graduate with the Ph.D. in Integrative Life Sciences.

## Curriculum requirements

A minimum total of 64 credits is required and is distributed as follows:

- 12 credits in core courses  
LFSC 510/ BIOL 545 Biological Complexity  
LFSC 520/BIOL 548 Bioinformatic Technologies  
LFSC 630 Integrative Life Sciences Research  
LFSC 690 Research Seminar in Integrative Life Sciences  
MICR 510 Scientific Integrity
- a minimum of three credits in an advanced statistics, advanced mathematics or experimental design course depending on the students area of research\*  
BIOL 606 Quantitative Ecology  
BIOS/STAT 523 Nonparametric Statistical Methods  
BIOS 524 Biostatistical Computing  
BIOS 572 Statistical Analysis of Biomedical Data  
BNFO/BIOL 601 Integrated Bioinformatics  
ENVS 603 Environmental Research Methods  
LFSC 610 Analytical Methods in Biocomplexity Analysis  
MATH 591 Topics in Mathematics: Mathematical Biology  
MATH 617 Applied Mathematics I  
STAT/BIOS 544 Statistical Methods II  
STAT 623 Discrete Multivariate Analysis  
STAT 643 Applied Linear Regression  
Other courses based on approval of research advisory committee
- a minimum of nine credits in elective courses based on research interest and approved by research advisory committee
- a minimum of 40 credits in directed research (LFSC 697)

\* Students are expected to enter the program with a proficiency in statistics at the introductory level, as exemplified by STAT/BIOS 543 Statistical Methods. Students not at this level, as evidenced by prior course work, will be required to take STAT/BIOS 543 or an equivalent course.

## Center for Environmental Studies

The goal of the master's programs is to provide a unique, interdisciplinary master's degree program in environmental studies that emphasizes the critical links between environmental life sciences and public policy. This goal necessitates training that crosses disciplinary boundaries. Through a program of study combining environmental science, environmental policy and emerging technologies, the successful graduate will gain a range of skills designed to facilitate a science-based understanding of the complex interactions between human activities and the natural world. The Center for Environmental Studies offers two graduate-degree options: a Master of Science (research option) requiring a thesis and a Master of Environmental Studies (non-thesis) that replaces the thesis with a directed research experience and a comprehensive exam. Refer to the [center's Web site](#) for more detailed program information.

### Administration

#### Gregory C. Garman

Director of the B.S. and Master's Programs in Environmental Studies and Director of the Center for Environmental Studies

## Environmental Studies, Master of (M.Envs.)

### Admission requirements summary

#### Environmental Studies, Master of (M.Envs.)

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.Envs.	Fall	Jul 1	GRE
(non-thesis degree option)	Spring	Dec 1	
	Summer	May 1	

**Special requirements:**  
See program [Web site](#)

The Center for Environmental Studies offers a Master of Environmental Studies (non-thesis option) that replaces the thesis with a directed research experience and a comprehensive exam.

### Admission requirements

Applicants should have successfully completed undergraduate training and hold a bachelor's degree. Admissions to the program are generally drawn from applicants with an undergraduate GPA above 3.0 (on a 4.0 scale or equivalent) and satisfactory scores on a current standardized graduate admissions test (i.e., GRE, minimum 1500, minimum 500 each for verbal, quantitative and analytical). Applicants holding an undergraduate degree from recognized foreign institutions should display an acceptable level of English proficiency by achieving a score of 600 or above on the TOEFL examination. Application forms and other university materials can be obtained from the Graduate School, Virginia Commonwealth University, P.O. Box 843051, Richmond, VA 23284-3051, or at <http://www.vcu.edu/graduate>.

### Degree requirements

In addition to general VCU graduation requirements, students must:

- complete a minimum of 33 graduate semester credits, approved by the program director, with an overall GPA of 3.0 or above. At least 15 semester credits must be at the 600 level.
- complete three required core courses (9 credits) and complete an additional 21 credits of approved graduate electives.

#### Core requirements (3 courses/9 credits)

ENVS 601 Environmental Studies Survey  
ENVS 603 Environmental Research Methods  
STAT 543 Statistical Methods I (or equivalent)

**Electives** (3 courses or 21 credits; courses must represent at least two of the disciplines below)

#### Environmental studies

ENVS 550 Ecological Risk Assessment  
ENVS/ANTH 556 Historical and Cultural Landscapes  
ENVS 590 Environmental Studies Seminar  
ENVS 692 Independent Study  
ENVS 693 Internship in Environmental Studies

#### Environmental policy and administration

ENVS/PADM 628 Environmental Policy and Administration  
ENVS 660 Virginia Environmental Law and Regulation  
ENVS 691 Business and the Environment  
PADM 601 Principles of Public Administration  
PADM/ENVS 691 River Policy and Management  
URSP 650 Environmental Planning  
URSP 652 Environmental Analysis

#### Environmental science/health

BIOL 501 Community Ecology  
BIOL 510 Conservation Biology  
BIOL 514 Stream Ecology  
BIOL/ENVS 532 Water Pollution Biology

BIOL 591 Applied and Environmental Microbiology  
 ENVS 650 Pesticides, Health and the Environment  
 ENVS 655 Environmental Hydrology  
 ENVS 670 Pollution Physiology  
 ENVS 691 Topics in Environmental Studies: Environmental Chemistry  
 ENVS 691 Topics in Environmental Studies: Environmental Toxicology  
 PMCH/ENVS 610 Environmental and Occupational Epidemiology

#### **Environmental technology**

URSP/ENVS 521 Introduction to GIS  
 ENVS 602 Environmental Technology  
 ENVS/URSP 654 Environmental Remote Sensing  
 URSP/ENVS 691 Environmental Applications of GIS  
 ENVS 691 EcolInformatics

Other electives may be allowed with prior permission of major adviser and program director. Students may not apply more than three credits (total) of ENVS 692 and/or ENVS 693 to the degree without prior approval of the major adviser and program director.

Students pursuing the M.Envs. Must complete, in addition to all other degree requirements, the following requirements in lieu of the six-credit thesis requirement: three credits of ENVS 692 Independent Study or ENVS 693 Internship and three credits of approved electives, for a total of 33 graduate semester credits. In addition, the student must pass an oral comprehensive examination.

### **Environmental Studies, Accelerated Bachelor of Science and Master of**

The accelerated B.S. and M.Envs. Program allows qualified students with a major in environmental studies to earn both degrees in five years by completing approved graduate courses during the senior years of their undergraduate program. The program will provide students with the opportunity to expand and deepen their knowledge of environmental studies while enhancing their professional credentials for the job market. Students in the program may count up to 12 hours of graduate courses toward both the B.S. and M.Envs. Degrees. Thus, the student may earn the two degrees with a minimum of 141 hours. Currently, the M.Envs. Program requires students to earn 33 graduate credits. Further information concerning the Accelerated B.S./M.Envs. Can be found in the VCU Undergraduate Bulletin.

### **Environmental Studies, Master of Science (M.S.)**

The Center for Environmental Studies offers a Master of Science in Environmental Studies (thesis option).

#### **Admission requirements**

Applicants should have successfully completed undergraduate training and hold a bachelor's degree. Admissions to the program are generally drawn from applicants with an undergraduate GPA above 3.0 (on a 4.0 scale or equivalent) and satisfactory scores on a current standardized graduate admissions test (i.e., GRE, minimum 1500, minimum 500 each for verbal, quantitative and analytical). Applicants holding an undergraduate degree from recognized foreign institutions should display an acceptable level of English proficiency by achieving a score of 600 or above on the TOEFL examination. Application forms and other university materials can be obtained from the Graduate School, Virginia Commonwealth University, P.O. Box 843051, Richmond, VA 23284-3051, or at <http://www.vcu.edu/graduate>.

#### **Degree requirements**

In addition to general VCU graduation requirements, students must:

- Complete a minimum of 33 graduate semester credits, approved by the program director, with an overall GPA of 3.0 or above. At least 15 semester credits must be at the 600 level.
- Complete three required core courses (9 credits), successfully defend a research thesis (6 credits) and complete an additional 18 credits of approved graduate electives.

#### **Core requirements** (3 courses/9 credits)

ENVS 601 Environmental Studies Survey  
 ENVS 603 Environmental Research Methods  
 STAT 543 Statistical Methods I (or equivalent)

#### **Thesis** (maximum of 6 credits; Research Option only)

ENVS 697/698 Research and Thesis

**Electives** (6 courses or 18 credits; courses must represent at least two of the disciplines below)

#### **Environmental studies**

ENVS 550 Ecological Risk Assessment  
 ENVS/ANTH 556 Historical and Cultural Landscapes  
 ENVS 590 Environmental Studies Seminar  
 ENVS 692 Independent Study  
 ENVS 693 Internship in Environmental Studies

#### **Environmental policy and administration**

ENVS/PADM 628 Environmental Policy and Administration  
 ENVS 660 Virginia Environmental Law and Regulation  
 ENVS 691 Business and the Environment  
 PADM 601 Principles of Public Administration  
 PADM/ENVS 691 River Policy and Management  
 URSP 650 Environmental Planning  
 URSP 652 Environmental Analysis

#### **Environmental science/health**

BIOL 501 Community Ecology  
 BIOL 510 Conservation Biology  
 BIOL 514 Stream Ecology  
 BIOL/ENVS 532 Water Pollution Biology  
 BIOL 591 Applied and Environmental Microbiology  
 ENVS 650 Pesticides, Health and the Environment  
 ENVS 655 Environmental Hydrology  
 ENVS 670 Pollution Physiology  
 ENVS 691 Topics in Environmental Studies: Environmental Chemistry  
 ENVS 691 Topics in Environmental Studies: Environmental Toxicology  
 PMCH/ENVS 610 Environmental and Occupational Epidemiology

#### **Environmental technology**

URSP/ENVS 521 Introduction to GIS  
 ENVS 602 Environmental Technology  
 ENVS/URSP 654 Environmental Remote Sensing  
 URSP/ENVS 691 Environmental Applications of GIS  
 ENVS 691 EcolInformatics

Other electives may be allowed with prior permission of major adviser and program director. Students may not apply more than three credits (total) of ENVS 692 and/or ENVS 693 to the degree without prior approval of the major adviser and program director.

**Center for the Study of Biological**

## Complexity

The Center for the Study of Biological Complexity is a new multidisciplinary focus of research and scholarly activity within VCU Life Sciences. The mission of the center is to apply the principles of complexity to contemporary biological problems in all aspects of research and scholarly activity, supporting research in integrative molecular, cellular and developmental biology.

### Administration

#### Gregory A. Buck

Director of the B.S./Master's and Master's in Bioinformatics and Director of the Center for the Study of Biological Complexity

## Bioinformatics, Master of (M.Biof.)

### Admission requirements summary

#### Bioinformatics, Master of (M.Biof.)

Indicate track:

The Master of Bioinformatics (M.Biof) represents a new type of master's degree, the Professional Science Master's, which is increasingly popular with students and industry employers. The M.Biof. is designed primarily for the entrepreneurial student seeking an accelerated master's program that blends comprehensive course work, significant but reduced research experience and a professional externship. The centerpiece of the M.Biof. option is the opportunity to extern for a full summer at an academic, government or industry location. While this degree prepares students for a variety of careers in the life sciences, it should be particularly attractive to students interested in entry-level positions in industry.

### Admission requirements

The purpose of the admission requirements for the graduate program in bioinformatics is to identify and select outstanding candidates whose motivation, background, potential and character have prepared them for the rigors of study required in the program. The Bioinformatics Admissions Committee will screen applications. The following requirements and procedures incorporate and fully comply with those of the VCU Graduate School.

- An undergraduate or previous graduate record indicating superior capabilities. Applicants must have a minimum GPA of 3.0 on a 4.0 scale for the last 60 credits of undergraduate work or for a completed graduate degree. This requirement may be waived by approval of the dean of the Graduate School.
- Satisfactory scores on the Graduate Record Examination (GRE). The verbal, quantitative and analytical writing sections of the GRE are required. Scores for appropriate advanced tests, in particular biology, chemistry or mathematics, are recommended.
- For an applicant whose native language is not English, satisfactory scores from a standardized test commonly used and deemed appropriate for evaluation of English language, such as the TOEFL.
- Letters of recommendation from at least three present or former instructors or other individuals qualified to evaluate the applicant's abilities to engage in graduate studies in bioinformatics.

- A written statement describing the applicant's interests, motivation, education and goals for pursuing graduate study in bioinformatics.
- Applicants must indicate which master's degree (M.S. or M.Biof.) they intend to seek.

### Prerequisites and bridge curricula for master's programs

While an ideal preparation for the bioinformatics master's programs would include substantial work in molecular biology, computer science, mathematics and statistics, the program has been designed to provide "bridge curricula" to accommodate academically strong students with majors in any one of these disciplines. These students would develop with the assistance of their adviser a "bridge curriculum" of largely undergraduate courses to meet the prerequisites for the program and prepare them for graduate-level work that emphasizes their chosen track but includes course work in the other two tracks.

Program prerequisites are listed below. In general, students will not need to address the set corresponding to their undergraduate major, but will usually need to address the other two sets. It is expected that all bridge course work will be completed during the first year.

1. Biology/genomic prerequisites: An introductory knowledge of biochemistry and molecular biology, met by taking General Chemistry I-II (e.g. CHEM 101-102), one semester of Organic Chemistry (e.g. CHEM 301), Cell Biology (e.g. BIOL 218), and Essentials of Molecular Biology in Bioinformatics (2 credit module: BNFO 507).
2. Computational science prerequisites: An introductory knowledge of discrete mathematics (e.g. MATH 211); an introductory knowledge of computer science including at least one general computer programming language, met by taking Structured Programming (e.g. CMSC 255) and Data Structures & Advanced Programming (e.g. CMSC 256). If needed, students will be advised to acquire additional prerequisite background by taking one credit of independent study in CMSC 697 (Directed Research).
3. Quantitative/statistical prerequisites: An introductory knowledge of math/statistics, met by taking Calculus with Analytic Geometry I (e.g. MATH 200) and Statistical Methods I (e.g. STAT 543).

### Curriculum

Core courses*	14
Track course work credits	12
Cross-track course work credits	9
Total graduate program credits	35
* Bioinformatics core	
MICR 510 Scientific Integrity	1
BNFO 601 Integrated Bioinformatics	3
BNFO 690 Seminars in Bioinformatics	1
BNFO 620 Bioinformatics Practicum	3
BNFO 700 Externship in Bioinformatics	6
Total graduate "core" credits	14

Students enrolled in the M.Biof. Program usually complete a 10- to 12-week full-time externship at an industrial, government or academic site, usually during the summer between their first and second years in the bioinformatics program. In preparation for this externship, students will enroll in BNFO 620 Bioinformatics Practicum, in the semester preceding their externship. Under the supervision of their major adviser and Graduate Advisory Committee, the external supervisor, and the coordinator of the Bioinformatics Practicum course, each student must develop and write a



short proposal outlining the plans for the externship. The project must be approved by the student's GAC, based on a short (10-page) paper submitted by the student. This paper will include background on the project including a review of the literature, the purpose, specific aims and rationale of the project, a statement about the specific hypothesis to be investigated, and proposed methods and statistical analyses.

Research projects will be based on ongoing research in the laboratories of the participating external adviser. Students in the program may perform research on the broad range of subjects, from molecules to ecosystems, encompassing the field of bioinformatics.

In the semester following the externship experience, M.Biof. students shall prepare a written paper describing the completed research performed during their externship following the format of the Graduate School for M.S. theses. An oral defense, consisting of a public presentation of the paper and a committee meeting to discuss the results, under the direction of the GAC but open to all faculty members and the adviser of the externship, shall be scheduled to examine the student's underlying fundamental knowledge of the disciplines encompassed by the student's research. Announcement of the oral defense, including the candidate's name, project title, and the day, place and time of the defense, shall be made at least 10 working days in advance of the defense.

## Advising

All new students entering the program will be able to discuss their options with the bioinformatics program coordinator and shall be assigned a track adviser, who is a faculty member of the CSBC, to assist with initial course selection and to provide advice concerning the program. All students in the M.Biof. Program will select a major adviser prior to beginning course work of the second semester in the program.

Subsequently, a Graduate Advisory Committee, headed by the major adviser, shall direct students enrolled in the program in their course work selections. The GAC shall consist of four members, all of whom must be members of the VCU graduate faculty. Individuals who are not already graduate faculty members, e.g. from another institution or industry, must apply to the dean of the Graduate School for temporary membership. The composition of the GAC shall be such that the significant areas for the student's focus are represented. At least one member of the committee shall be from departments other than that of the major adviser, to provide a diversity of perspective on the committee. Students and their major advisers should form their committees no later than the end of their second semester of study. Final approval of the GAC membership shall be by the Bioinformatics Program Committee and the director of the Bioinformatics Program.

## Tracks

The M.Biof. offers three tracks, each composed of 21 credits including:

1. six credits from track-specific List A,
2. six additional credits from either List A or List B and
3. nine credits of "Cross-Track" course work (i.e. from Lists A or B from the other two tracks), including at least one course from each of the two tracks.

In selecting their courses, students must keep in mind the Graduate School requirement that at least 50 percent of the courses taken to meet program requirements must be in courses restricted to graduate students.

Additional electives may be substituted in consultation with the graduate committee. If equivalent graduate courses to those listed have already been taken outside of this master's program, the policies of the VCU

Graduate School would determine the extent to which such course work could be counted toward the bioinformatics master's degree.

## Biology/Genomics Track

### Admission requirements summary

#### Biology/Genomics Track

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S. (thesis degree option)	Fall Spring Summer	Jul 1 Nov 15 May 1	GRE

#### Special requirements:

\* International students requiring temporary U.S. visas should apply by Apr 1 for fall admission, Oct 1 for spring admission or Feb 1 for summer admission.

See program [Web site](#)

#### List A

BNFO/BIOL 540 Fundamentals of Molecular Genetics	3
BNFO/BIOL 541 Laboratory in Molecular Genetics	2
BNFO 650 Sequence Analysis in Biological Systems	3
BNFO/MICR 653 Advanced Molecular Genetics: Bioinformatics	3
MEDC 541 Survey of Molecular Modeling Methods	1
MEDC 670 Adv Molecular Modeling Theory and Practice	3

#### List B

BIOC/MICR 503 Biochemistry, Cell and Molecular Biology	5
BIOC/MICR 504 Biochemistry, Cell and Molecular Biology	5
BIOC 602 Physical Properties of Macromolecules	2-4
BIOL 550 Ecological Genetics	3
BNFO 591 Special Topics in Bioinformatics (with adviser's approval)	variable
BNFO 592 Independent Study	variable
BNFO 690 Seminars in Bioinformatics	1*
BNFO 692 Independent Study	variable
CHEM 633 Mass Spectrometry	1.5
ENVS 691 Topics in Environmental Studies: Ecoinf.: Managing Ecological and Environmental Data	1
HGEN/BIOL 516 Population Genetics	3
MEDC 691 Spec. Topics in Medicinal Chemistry: Bioinformatics/Drug Research	3
MICR 605 Prokaryotic Molecular Genetics	3

## Computational Science Track

### Admission requirements summary

#### Computational Science Track

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S. (thesis degree option)	Fall Spring Summer	Jul 1 Nov 15 May 1	GRE

#### Special requirements:

\* International students requiring temporary U.S. visas should apply by Apr 1 for fall admission, Oct 1 for spring admission or Feb 1 for summer admission.

See program [Web site](#)

#### List A

CMSC 502 Parallel Programming	3
CMSC 508 Database Theory	3
CMSC 509 Artificial intelligence	3
CMSC 511 Computer Graphics	3

#### List B



BNFO 591 Special Topics in Bioinformatics (with adviser's approval)	variable
BNFO 592 Independent Study	variable
BNFO 690 Seminars in Bioinformatics	1*
BNFO 692 Independent Study	variable
CMSC 591 Topics in Computer Science (with3 adviser's permission)	
CMSC 602 Operating Systems	3
CMSC 608 Advanced Database	3
CMSC 611 Advanced Computer Graphics	3
CMSC 691 Special Topics in Computer Science (with adviser's permission)	3
CMSC 691 Special Topics in Computer Science: Knowledge Systems	3

\* In addition to 1 credit of Seminar required in the core, students may count only 1 additional credit of seminar as an elective toward degree requirements.

## Quantitative/Statistics Track

### Admission requirements summary

#### Quantitative/Statistics Track

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S. (thesis degree option)	Fall	Jul 1	GRE
	Spring	Nov 15	
	Summer	May 1	

#### Special requirements:

\* International students requiring temporary U.S. visas should apply by Apr 1 for fall admission, Oct 1 for spring admission or Feb 1 for summer admission.

See program [Web site](#)

#### List A

BIOS 572 Statistical Analysis of Biomedical Data	3
BIOS 631 Multivariate Analysis I	4
BIOS 667 Advanced Data Analysis	3
STAT/BIOS 513 Mathematical Statistics I	3
STAT/BIOS 514 Mathematical Statistics II	3
Statistical methods:	6
BIOS 553-554 Applied Statistics or BIOS/STAT 543 and 544 Statistical Methods I and II	
An experimental design course:	3
BIOS 650 Design and Analysis of Response Surface Experiments or STAT 642 Design and Analysis of Experiments	

#### List B

BIOS 524 Biostatistical Computing	3
BIOS/STAT 543 Statistical Methods I	3
BIOS/STAT 544 Statistical Methods II	3
BIOS 546 Linear Models	3
BIOS 553 Applied Statistics	3
BIOS 554 Applied Statistics	3
BIOS 567 Statistical Methods for Microarray Data	3
BIOS 650 Design and Analysis of Response Surface Experiments	3
BNFO 591 Special Topics in Bioinformatics (with adviser's approval)	variable
BNFO 592 Independent Study	variable
BNFO 690 Seminars in Bioinformatics	1*
BNFO 692 Independent Study	variable
MATH 591 Topics in Mathematics: Mathematical Biology	3
STAT 541 Applied Statistics for Engineers and Scientists	3
STAT 642 Design and Analysis of Experiments	3

\* In addition to 1 credit of Seminar required in the core, students may count only 1 additional credit of seminar as an elective toward degree requirements.

## Bioinformatics, Accelerated Bachelor's to Master's

The Accelerated Bachelor's to Master's Program in Bioinformatics permits selected students majoring in bioinformatics to earn the Bachelor of Science and master's degrees in a minimum of five years by taking certain graduate level courses during the senior year of their undergraduate program. The program is restricted to students with strong credentials and a clear interest in a career in the field of bioinformatics.

### Admission requirements and procedures

#### Regular admission

In order to be admitted formally into the program through the regular admissions process, a student must be a VCU bioinformatics major, must have completed 90 semester credit hours with an overall GPA of at least 3.0, including at least 50 credits of collateral and core course work within the major with a GPA in that work of at least 3.3. An application must be submitted to the Graduate School that includes:

- two form-based recommendations from VCU faculty,
- a personal statement and
- scores from the GRE General Test.

Applicants should indicate which master's degree program (Master of Science in Bioinformatics or Master of Bioinformatics) is of interest to them. Applications will be screened by the Bioinformatics Admissions Committee, which consists of one member from each of the major tracks and the bioinformatics program coordinator. Most students will be able to initiate the application process during the second semester of their junior year. Students provisionally accepted into the program will be notified in time to register for courses as accelerated students but will not be formally admitted into the program until they have completed all requirements listed above.

Following acceptance into the accelerated program, students must continue to meet the requirements stated above throughout the senior year, as well as the graduate student standards of performance specified in this Bulletin in order to be awarded formal acceptance into the graduate program, which typically takes place just prior to the fall semester of the fifth year.

#### Guaranteed admission

The bioinformatics master's program participates in the Guaranteed Admission Program. This program allows highly qualified high school seniors who will be participating in the VCU Honors Program to gain admission into selected VCU graduate programs without competing for that admission at a later date. In order to apply for guaranteed admission, the student must have obtained a combined score of 1270, in a single sitting, on the SATI, with neither score below 530, and have achieved a minimum 3.0 unweighted GPA (4.0 scale). Once accepted into the Guaranteed Admission Program, bioinformatics students must fulfill the requirements of the Honors Program for graduation with University Honors, maintain a cumulative GPA of 3.50, progress satisfactorily in honors courses and meet course requirements of the bioinformatics graduate program in order to remain exempt from competing for admission into the master's program. Guaranteed admission applicants will be screened by the Bioinformatics Admissions Committee.

### Shared credits for accelerated program

1.	*BNFO 620 (Bioinformatics Practicum) or BNFO 508 (Introduction to Bioinformatics Research) replaces BNFO 420 (Applications in Bioinformatics) for the M.Biof. and M.S., respectively	3
2.	Course work taken to meet master's cross-track requirements replaces undergraduate program electives.	6
3.	A graduate course within the track replaces a BS-track required (if approved by adviser) or elective course.	3
Total shared credits		12

\* For accelerated program students, BNFO 620 or BNFO 508 replaces BNFO 420 to meet the "oral communication" general education requirement.

## Bioinformatics, Master of Science (M.S.)

### Admission requirements summary

#### Bioinformatics, Master of Science (M.S.)

Indicate track:

The Master of Science in Bioinformatics offers a traditional research-oriented master's degree culminating in submission and defense of a thesis. The goal of this program is to prepare students for research careers in university, foundation or industry laboratories, as well as for further research training in a Ph.D. program.

### Admission requirements

The purpose of the admission requirements for the graduate program in bioinformatics is to identify and select outstanding candidates whose motivation, background, potential and character have prepared them for the rigors of study required in the program. The Bioinformatics Admissions Committee will screen applications. The following requirements and procedures incorporate and fully comply with those of the VCU Graduate School.

- An undergraduate or previous graduate record indicating superior capabilities. Applicants must have a minimum GPA of 3.0 on a 4.0 scale for the last 60 credits of undergraduate work or for a completed graduate degree. This requirement may be waived by approval of the dean of the Graduate School.
- Satisfactory scores on the Graduate Record Examination (GRE). The verbal, quantitative and analytical writing sections of the GRE are required. Scores for appropriate advanced tests, in particular biology, chemistry or mathematics, are recommended.
- For an applicant whose native language is not English, satisfactory scores from a standardized test commonly used and deemed appropriate for evaluation of English language, such as the TOEFL.
- Letters of recommendation from at least three present or former instructors or other individuals qualified to evaluate the applicant's abilities to engage in graduate studies in bioinformatics.
- A written statement describing the applicant's interests, motivation, education and goals for pursuing graduate study in bioinformatics.
- Applicants must indicate which master's degree (M.S. or M.Biof.) they intend to seek.

### Prerequisites and bridge curricula for master's programs

While an ideal preparation for the bioinformatics master's programs would include substantial work in molecular biology, computer science, mathematics and statistics, the program has been designed to provide "bridge curricula" to accommodate academically strong students with majors in any one of these disciplines. These students would develop with the assistance of their adviser a "bridge curriculum" of largely undergraduate courses to meet the prerequisites for the program and prepare them for graduate-level work that emphasizes their chosen track but includes course work in the other two tracks.

Program prerequisites are listed below. In general, students will not need to address the set corresponding to their undergraduate major, but will usually need to address the other two sets. It is expected that all bridge course work will be completed during the first year.

1. Biology/genomic prerequisites: An introductory knowledge of biochemistry and molecular biology, met by taking General Chemistry I-II (e.g. CHEM 101-102), one semester of Organic Chemistry (e.g. CHEM 301), Cell Biology (e.g. BIOL 218), and Essentials of Molecular Biology in Bioinformatics (2 credit module: BNFO 507).
2. Computational science prerequisites: An introductory knowledge of discrete mathematics (e.g. MATH 211); an introductory knowledge of computer science including at least one general computer programming language, met by taking Structured Programming (e.g. CMSC 255) and Data Structures & Advanced Programming (e.g. CMSC 256). If needed, students will be advised to acquire additional prerequisite background by taking one credit of independent study in CMSC 697 (Directed Research).
3. Quantitative/statistical prerequisites: An introductory knowledge of math/statistics, met by taking Calculus with Analytic Geometry I (e.g. MATH 200), Foundations and Statistical Methods I (STAT 543).

### Advising

All new students entering the program will be able to discuss their options with the bioinformatics program coordinator and shall be assigned a track adviser, who is a faculty member of the CSBC, to assist with initial course selection and to provide advice concerning the program. All students in the M.S. in Bioinformatics program will select a major adviser prior to beginning course work of the second semester in the program.

Subsequently, a Graduate Advisory Committee, headed by the major adviser, shall direct students enrolled in the program in their research and course work selections. The GAC shall consist of four members, all of whom must be members of the VCU graduate faculty. Individuals who are not already graduate faculty members, e.g. from another institution or industry, must apply to the dean of the Graduate School for temporary membership. The composition of the GAC shall be such that the significant areas for the student's research focus are represented. At least one member of the committee shall be from departments other than that of the major adviser, to provide a diversity of perspective on the committee. Students and their major advisers should form their committees no later than the end of their second semester of study. Final approval of the GAC membership shall be by the Bioinformatics Program Committee and the director of the Bioinformatics Program.

### Curriculum

Core courses*	20
Track course work credits	12
Cross-track course work credits	9

Total graduate program credits	41
* Bioinformatics core	
MICR 510 Scientific Integrity	1
BNFO 601 Integrated Bioinformatics	3
BNFO 690 Seminars in Bioinformatics	1
BNFO 508 Introduction to Bioinformatics Research	3
BNFO 697 Directed Research in Bioinformatics	12
Total graduate "core" credits	20

### Thesis research

Students in the M.S. program must perform a credible original investigation under the supervision of their major adviser and Graduate Advisory Committee. Each student must develop and write a short proposal in consultation with his or her major adviser and GAC. The project must be approved by the student's GAC, based on a short (10-page) paper submitted by the student. This paper will include background on the project including a review of the literature, the purpose, specific aims and rationale of the project, a statement about the specific hypothesis to be investigated, and proposed methods and statistical analyses.

Research projects will be based on ongoing research in the laboratories of faculty in the CSBC and across both campuses of VCU and the Virginia BioTechnology Research Park. Students in the program may perform research on the broad range of subjects, from molecules to ecosystems, studied by CSBC faculty.

Students shall prepare a written thesis describing the completed research performed during their tenure in the M.S. in Bioinformatics program following the format of the Graduate School. An oral defense, consisting of a public presentation of the thesis and a committee meeting to discuss the thesis, under the direction of the GAC but open to all faculty members, shall be scheduled to examine the student's research, thesis and underlying fundamental knowledge of the discipline's encompassed by the student's research. Announcement of the oral defense, including the candidate's name, thesis title, and the day, place and time of the defense, shall be made at least 10 working days in advance of the defense.

### Tracks

The M.S. program offers three tracks, each composed of 21 credits including:

1. six credits from track-specific List A,
2. six additional credits from either List A or List B and
3. nine credits of "Cross-Track" course work (i.e. from Lists A or B from the other two tracks), including at least one course from each of the two tracks.

In selecting their courses, students must keep in mind the Graduate School requirement that at least 50 percent of the courses taken to meet program requirements must be in courses restricted to graduate students.

Additional electives may be substituted in consultation with the graduate committee. If equivalent graduate courses to those listed have already been taken outside of this master's program, the policies of the VCU Graduate School would determine the extent to which such course work could be counted toward the bioinformatics master's degree.

### Biology/Genomics Track

### Admission requirements summary

#### Biology/Genomics Track

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S. (thesis degree option)	Fall Spring Summer	Jul 1 Nov 15 May 1	GRE

#### Special requirements:

\* International students requiring temporary U.S. visas should apply by Apr 1 for fall admission, Oct 1 for spring admission or Feb 1 for summer admission. See program [Web site](#) for additional information.

#### List A

BNFO/BIOL 540 Fundamentals of Molecular Genetics	3
BNFO/BIOL 541 Laboratory in Molecular Genetics	2
BNFO 650 Sequence Analysis in Biological Systems	3
BNFO/MICR 653 Advanced Molecular Genetics: Bioinformatics	3
MEDC 541 Survey of Molecular Modeling Methods	1
MEDC 670 Adv Molecular Modeling Theory and Practice	3

#### List B

BIOC/MICR 503 Biochemistry, Cell and Molecular Biology	5
BIOC/MICR 504 Biochemistry, Cell and Molecular Biology	5
BIOC 602 Physical Properties of Macromolecules	2-4
BIOL 550 Ecological Genetics	3
BNFO 591 Special Topics in Bioinformatics (with adviser's approval)	variable
BNFO 592 Independent Study	variable
BNFO 690 Seminars in Bioinformatics	1*
BNFO 692 Independent Study	variable
CHEM 633 Mass Spectrometry	1.5
ENVS 691 Topics in Environmental Studies: Ecoinf.: Managing Ecological and Environmental Data	1
HGEN/BIOL 516 Population Genetics	3
MEDC 691 Spec. Topics in Medicinal Chemistry: Bioinformatics/Drug Research	3
MICR 605 Prokaryotic Molecular Genetics	3

\* In addition to 1 credit of seminar required in the core, students may count only 1 additional credit of seminar as an elective toward degree requirements.

### Computational Science Track

### Admission requirements summary

#### Computational Science Track

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S. (thesis degree option)	Fall Spring Summer	Jul 1 Nov 15 May 1	GRE

#### Special requirements:

\* International students requiring temporary U.S. visas should apply by Apr 1 for fall admission, Oct 1 for spring admission or Feb 1 for summer admission. See program [Web site](#) for additional information.

#### List A

CMSC 502 Parallel Programming	3
CMSC 508 Database Theory	3
CMSC 509 Artificial intelligence	3
CMSC 511 Computer Graphics	3

#### List B

BNFO 591 Special Topics in Bioinformatics (with adviser's approval)	variable
BNFO 592 Independent Study	variable
BNFO 690 Seminars in Bioinformatics	1*

BNFO 692 Independent Study	variable
CMSC 591 Topics in Computer Science (with3 adviser's permission)	
CMSC 602 Operating Systems	3
CMSC 608 Advanced Database	3
CMSC 611 Advanced Computer Graphics	3
CMSC 691 Special Topics in Computer Science (with adviser's permission)	3
CMSC 691 Special Topics in Computer Science: Knowledge Systems	3

\* In addition to 1 credit of Seminar required in the core, students may count only 1 additional credit of seminar as an elective toward degree requirements.

## Quantitative/Statistics Track

### Admission requirements summary

#### Quantitative/Statistics Track

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.S. (thesis degree option)	Fall Spring Summer	Jul 1 Nov 15 May 1	GRE

#### Special requirements:

\* International students requiring temporary U.S. visas should apply by Apr 1 for fall admission, Oct 1 for spring admission or Feb 1 for summer admission. See program [Web site](#) for additional information.

#### List A

BIOS 572 Statistical Analysis of Biomedical Data	3
BIOS 631 Multivariate Analysis I	4
BIOS 667 Advanced Data Analysis	3
STAT/BIOS 513 Mathematical Statistics I	3
STAT/BIOS 514 Mathematical Statistics II	3
Statistical methods:	6
BIOS 553-554 Applied Statistics or BIOS/STAT 543 and 544 Statistical Methods I and II	
An experimental design course:	3
BIOS 650 Design and Analysis of Response Surface Experiments or STAT 642 Design and Analysis of Experiments	

#### List B

BIOS 524 Biostatistical Computing	3
BIOS/STAT 543 Statistical Methods I	3
BIOS/STAT 544 Statistical Methods II	3
BIOS 546 Linear Models	3
BIOS 553 Applied Statistics	3
BIOS 554 Applied Statistics	3
BIOS 567 Statistical Methods for Microarray Data	3
BIOS 650 Design and Analysis of Response Surface Experiments	3
BNFO 591 Special Topics in Bioinformatics (with adviser's approval)	variable
BNFO 592 Independent Study	variable
BNFO 690 Seminars in Bioinformatics	1*
BNFO 692 Independent Study	variable
MATH 591 Topics in Mathematics: Methods of Applied Mathematics for Life Sciences	3
STAT 541 Applied Statistics for Engineers and Scientists	3
STAT 642 Design and Analysis of Experiments	3

\* In addition to 1 credit of Seminar required in the core, students may count only 1 additional credit of seminar as an elective toward degree requirements.

The Accelerated Bachelor's to Master's Program in Bioinformatics permits selected students majoring in bioinformatics to earn the Bachelor of Science and master's degrees in a minimum of five years by taking certain graduate level courses during the senior year of their undergraduate program. The program is restricted to students with strong credentials and a clear interest in a career in the field of bioinformatics.

### Admission requirements and procedures

#### Regular admission

In order to be admitted formally into the program through the regular admissions process, a student must be a VCU bioinformatics major, must have completed 90 semester credit hours with an overall GPA of at least 3.0, including at least 50 credits of collateral and core course work within the major with a GPA in that work of at least 3.3. An application must be submitted to the Graduate School that includes:

- two form-based recommendations from VCU faculty,
- a personal statement and
- scores from the GRE General Test.

Applicants should indicate which master's degree program (Master of Science in Bioinformatics or Master of Bioinformatics) is of interest to them. Applications will be screened by the Bioinformatics Admissions Committee, which consists of one member from each of the major tracks and the bioinformatics program coordinator. Most students will be able to initiate the application process during the second semester of their junior year. Students provisionally accepted into the program will be notified in time to register for courses as accelerated students but will not be formally admitted into the program until they have completed all requirements listed above.

Following acceptance into the accelerated program, students must continue to meet the requirements stated above throughout the senior year, as well as the graduate student standards of performance specified in this Bulletin in order to be awarded formal acceptance into the graduate program, which typically takes place just prior to the fall semester of the fifth year.

#### Guaranteed admission

The bioinformatics master's program participates in the Guaranteed Admission Program. This program allows highly qualified high school seniors who will be participating in the VCU Honors Program to gain admission into selected VCU graduate programs without competing for that admission at a later date. In order to apply for guaranteed admission, the student must have obtained a combined score of 1270, in a single sitting, on the SATI, with neither score below 530, and have achieved a minimum 3.0 unweighted GPA (4.0 scale). Once accepted into the Guaranteed Admission Program, bioinformatics students must fulfill the requirements of the Honors Program for graduation with University Honors, maintain a cumulative GPA of 3.50, progress satisfactorily in honors courses and meet course requirements of the bioinformatics graduate program in order to remain exempt from competing for admission into the master's program. Guaranteed admission applicants will be screened by the Bioinformatics Admissions Committee.

### Shared credits for accelerated program

## Bioinformatics, Accelerated Bachelor's to Master's

- |  |   |
|--|---|
| <p>1.           *BNFO 620 (Bioinformatics Practicum) 3<br/>              or BNFO 508 (Introduction<br/>              to Bioinformatics Research) replaces<br/>              BNFO 420 (Applications in<br/>              Bioinformatics) for the M.Biof. and M.S.,<br/>              respectively</p> <p>2.           Course work taken to meet master's 6<br/>              cross-track requirements replaces<br/>              undergraduate program electives.</p> | <p>3.           A graduate course within the track 3<br/>              replaces a BS-track required (if<br/>              approved by adviser) or elective course.</p> <p>Total shared credits 12</p> <p>* For accelerated program students, BNFO 620 or BNFO 508 replaces<br/>BNFO 420 to meet the "oral communication" general education<br/>requirement.</p> |
|--|---|

# Graduate School

Graduate programs are administered by the individual departments, schools and centers with assistance from the Graduate School. Major coordination of the various degree programs is performed by the University Graduate Council chaired by the dean of the Graduate School. The University Graduate Council is comprised of two elected faculty members from each school and one elected faculty member from VCU Life Sciences.

The Graduate School section of the VCU Bulletins documents the official admission and academic rules and regulations that govern graduate education at the university. The University Graduate Council determines these policies.

The [archived](#) copy of each bulletin reflects all policies and procedures in effect at the beginning of the stated academic year. The online Bulletin itself is updated regularly to reflect changes that occur throughout the academic year.

## Graduate programs

In-depth descriptions of all graduate programs at VCU are provided in the individual school and program sections of this bulletin. The Graduate School Web site ([www.vcu.edu/graduate](http://www.vcu.edu/graduate)) provides links and contact information for all graduate programs offered at VCU. The Web site also provides updates that occur throughout the academic year, as well as the Application to Graduate Study and complete instructions for applying to all graduate programs.

Refer to the Program Search feature of this Web site for a complete listing of all graduate programs, as well as application deadline dates, and special admission requirements and contact information. Applicants are encouraged to contact the school/department sponsoring the intended program of study at the telephone numbers and/or e-mail addresses provided. Other important contact information is provided on the [Graduate School](#) Web site as well.

## Important information for all graduate students



On behalf of the graduate faculty, I welcome you to graduate study at Virginia Commonwealth University. At VCU you will find a comprehensive array of academic programs, outstanding faculty and a supportive environment conducive to graduate study and research. The university offers nationally and internationally acclaimed graduate and research programs that meet the many needs of the commonwealth of Virginia, the United States and the world.

The University Graduate Council, chaired by the dean of the Graduate School, provides academic and administrative oversight and coordination of all graduate programs in accordance with the Graduate School's mission: to provide leadership in all matters relating to graduate education at Virginia Commonwealth University in order to create a stimulating environment for teaching, learning, research, creative expression and public service. The VCU Graduate Bulletin Web site documents the official

admission and academic rules and regulations that govern graduate education for all graduate programs at the university. These policies are established by the graduate faculty of the university through their elected representatives to the University Graduate Council.

Academic departments and schools administer individual graduate degree programs with the assistance and support of the VCU Graduate School. In-depth descriptions of all graduate programs at VCU are provided in the individual school and program sections of this bulletin.

It is the responsibility of all graduate students to be familiar with the Graduate Bulletin of record (the bulletin in effect at the time of official admission), as well as the academic regulations in individual school and department publications and on program Web sites; however, in all cases, the official policies and procedures of the University Graduate Council, as published on this Graduate Bulletin Web site and on the Graduate School Web site, take precedent over individual program policies and guidelines. Graduate students should contact the Graduate School at any time regarding questions relating to graduate study at VCU.

I commend you for your decision to pursue graduate study, and I wish you every success in the pursuit of your educational goals at Virginia Commonwealth University.

Sincerely,

F. Douglas Boudinot  
Dean of the Graduate School

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## Admission to graduate study

The Board of Visitors, the administration and the faculty of VCU are committed to a policy of equal opportunity in education and employment without regard to age, race, color, national origin, gender, religion, sexual orientation, veteran's status, political affiliation or disability.

## Admission requirements

General admission requirements for graduate study in the university are:



1. graduation from an accredited college or university or its equivalent,
2. except in very unusual cases approved by the graduate dean, a minimum undergraduate GPA of 2.7 on a 4.0 scale for at least the last two years of undergraduate work,
3. satisfactory scores from a current (less than five years old) standardized test commonly used and deemed appropriate by the particular discipline,
4. three letters of recommendation,
5. applicant's written statement of intent for pursuing graduate studies in a particular discipline, and
6. such additional requirements as may be established by individual programs and schools. These may include personal interviews, auditions, submission of a portfolio or other materials.

An exception to the general admissions requirements is made for students entering through the Guaranteed Admissions Programs of the University Honors Program. (See the heading "[Admission through the University Honors Program](#)" in this section.)

### Types of admissions

Students may be admitted to graduate study under one of the following classifications:

#### Degree-seeking student

An applicant who meets all requirements for admission to a degree program and who has been recommended by the department or school in which the applicant proposes to study may be admitted as a degree-seeking student.

#### Provisional student

An applicant who is missing an official document or test score may be admitted provisionally to a degree program, if recommended by the department and approved by the graduate dean. Pending documentation must be provided by the end of the first semester of enrollment. An applicant who has not fully met the requirements of the program or school to which admission is sought also may be admitted to that program or school as a provisional student.

Reasons for requesting a provisional admission are evaluated by the department/program and the school, and documents supporting a request of provisional admission are forwarded to the dean of the Graduate School with a request for admission. Conditions of a provisional admission for unmet academic standards must be met within one year of enrollment. No prerequisite courses taken as a provisional student may be applied toward a graduate degree. Failure to meet conditions of provisional admission will result in the student's dismissal from the Graduate School.

#### Nondegree-seeking student

An individual who wishes to take graduate courses without formal admission to a degree program is classified as a nondegree-seeking student. There is no limit to the number of credits a nondegree-seeking student may take, as long as the student's academic performance is credible. In courses where enrollment is limited, first priority is given to students admitted to the program, followed by other VCU graduate degree-seeking students. Nondegree-seeking students are not exempt

from any prerequisite that may be specified for a course. A nondegree-seeking student who is later admitted as a degree-seeking student will not be allowed to apply toward a degree more than six credits earned as a nondegree-seeking student.

In order to enroll in graduate courses as a nondegree-seeking student, students must have graduated (or be in final term expecting to graduate) from a regionally accredited college or university or its equivalent. Information and forms [certifying eligibility](#) to take graduate courses are available at VCU Records and Registration service centers, or at the Graduate School, which is located in Moseley House on the Monroe Park Campus.

### Entrance examinations

To supplement other evidence of preparation for graduate work, most graduate programs at VCU consider the scores from current standardized tests commonly used and deemed appropriate for a given discipline. Applicants should refer to the individual program screens of this Web site for a specific test requirements. Applicants are encouraged to visit individual department and program Web sites and to contact the school/department sponsoring the intended program of study at the telephone numbers and/or e-mail addresses listed for additional information about specific test score requirements.

Schools or programs reserve the right to accept standardized test scores older than five years, as long as official test scores are available from the testing service. Any exceptions to the general requirement proposed by schools or programs must be approved by the University Graduate Council.

Individual exceptions to this requirement may be considered: (a) for students with previous graduate degrees, (b) for students with demonstrated competency (achievement of a grade "B" or above) in course work at the graduate level, preferably in the context of an advanced-degree program and (c) for students entering graduate study through the [Guaranteed Admission Programs of the University Honors Program](#). Any student considered for waiver of standardized testing requirements must meet all other requirements for full admission to the program to which he or she is applying.

Common examinations used at VCU are the Graduate Record Examination (GRE), the Graduate Management Admissions Test (GMAT), the Law School Admissions Test (LSAT), and the Miller Analogies Test (MAT). These examinations will not replace other records of achievement as a basis for admission to the Graduate School, but will offer additional evidence concerning the qualifications of students wishing to undertake graduate work.

### Guaranteed Admission through The Honors College

VCU students participating in The Honors College may apply for guaranteed admission to certain graduate programs before matriculation at VCU or early in their undergraduate studies. (The specific deadline for applying is set by each program.) Honors students who receive guaranteed admission may enter the programs of their choice without submitting additional application materials or test scores (in some programs, test scores are required for statistical purposes only) provided they fulfill the requirements for graduation with University Honors and satisfy the curricular prerequisites of the program they plan to enter.

Prior to application for guaranteed admission to a graduate program, the student should meet with the associate director of The Honors College. Following that meeting, the student must submit a completed graduate application form with three letters of recommendation to The Honors College, which will then forward it with an endorsement of eligibility to the Graduate School. To be accepted into a Guaranteed Admission Program, a student must be accepted by the university, by The Honors College and

by the admissions committee of the program the student wishes to enter. The admissions committee may require an interview. Final notification of guaranteed admission is made by the dean of the Graduate School.

For additional information, refer to the [Undergraduate Bulletin](#), or contact The Honors College office at P.O. Box 843010, Richmond, VA 23284-3010; phone (804) 828-1803; or visit online at [www.vcu.edu/honors](http://www.vcu.edu/honors).

Programs that offer guaranteed admission through the University Honors Program are:

Doctor of Dental Surgery  
 Doctor of Medicine  
 Doctor of Physical Therapy  
 Doctor of Philosophy  
   Anatomy  
   Biochemistry  
   Biomedical Engineering  
   Biostatistics  
   Human Genetics  
   Microbiology and Immunology  
   Nursing  
   Pharmacology and Toxicology  
   Physiology  
   Psychology  
 Master of Accountancy  
 Master of Arts  
   Economics  
   History  
 Master of Bioinformatics  
 Master of Business Administration  
 Master of Education  
   Adult Learning  
   Counselor Education  
   Special Education  
     Early Childhood Special Education  
     Emotional Disturbance  
     Mental Retardation  
     Learning Disabilities  
     Severe Disabilities  
 Master of Environmental Studies  
 Master of Health Administration  
 Master of Public Administration  
 Master of Public Health  
 Master of Science  
   Anatomy  
   Biochemistry  
   Bioinformatics  
   Biomedical Engineering  
   Biostatistics  
   Business  
   Clinical Laboratory Sciences  
   Computer Science  
   Criminal Justice  
   Environmental Studies  
   Genetic Counseling  
   Gerontology  
   Health and Movement Sciences  
   Human Genetics  
   Mathematical Sciences  
   Microbiology and Immunology  
   Nursing (except Case Management Track)  
   Pharmacology and Toxicology  
   Physics/Applied Physics  
   Physiology  
   Recreation, Parks and Sport Leadership  
   Rehabilitation Counseling  
 Master of Science in Nurse Anesthesia

Master of Science in Occupational Therapy  
 Master of Taxation  
 Master of Teaching  
 Master of Urban and Regional Planning

### Multiple admissions

Students may not be admitted to degree-seeking status and enrolled in more than one graduate program without petitioning and receiving written permission from the program director or graduate committee of the school(s) in which the student is enrolled and the dean of the Graduate School.

### Undergraduate students in graduate classes

VCU undergraduates may enroll in 500-level courses with approval of their advisers and consent of the programs offering the courses. Highly qualified undergraduates approaching the last semester of study may apply for admission to a graduate program. If accepted, they may enroll in two graduate courses during the last semester of undergraduate study. Their total load should not exceed 16 hours of combined credit. Credit for any course is applicable toward only one degree unless a student is admitted to a course of study that allows a defined number of shared courses.

### International students

The university encourages qualified international students, both nonimmigrant and immigrant, to seek admission to VCU. Complete information and application materials for international students may be obtained on written request from Virginia Commonwealth University, International Admissions, P.O. Box 843043, Richmond, VA, United States 23284-3043; by phone at (804) 828-6016; by e-mail: [vcuia@vcu.edu](mailto:vcuia@vcu.edu); or online at <http://www.vcu.edu/oie/ia/welcome.html>.

### English Language Proficiency Requirement

To ensure maximum benefit from academic study at VCU, all non-native English-speaking applicants, regardless of immigration status, must provide evidence of English language proficiency before admission and/or enrollment in the university.

Evidence of English language proficiency is evaluated based on factors such as length of stay in the United States, amount and type of formal U.S. education, Test of English as a Foreign Language (TOEFL) or International English Language Testing System (IELTS) scores and other standardized test scores such as the GRE or GMAT.

The Graduate School reserves the right to require additional testing and study in the VCU English Language Program prior to full-time enrollment in university courses. The university offers a full-time English-as-a-Second-Language noncredit program. For information on the VCU English Language Program, including fees, international students can contact the English Language Program, Virginia Commonwealth University, P.O. Box 843043, Richmond, VA 23284-3043, United States; (804) 828-2551, or by e-mail: [oie-elp@vcu.edu](mailto:oie-elp@vcu.edu); or online at <http://www.vcu.edu/oie/elp>.

### Nonimmigrants (students with temporary U.S. visas)

Because of the amount of time required to process applications from international students and for international students to obtain their visas, prospective students should apply well in advance of the international application deadlines. The deadlines are April 1 for fall semester, Oct. 1 for spring semester and Feb. 1 for summer session. Students also must meet specific program deadlines that may be different from April 1, Oct. 1 and

Feb. 1, respectively. The graduate dean must authorize any exception to application deadlines. All required admission documents must be submitted no later than eight weeks prior to registration if appropriate immigration documents are to be issued. Applicants who are unable to meet this credential deadline will need to defer the intended semester of entry.

Both U.S. government regulations and VCU admission policies require nonimmigrant applicants to demonstrate:

- satisfactory academic achievement,
- adequate English language proficiency, and
- ability to finance all educational and living expenses.

International students are advised to refer to university and program admission requirements in this bulletin for other information requested of all applicants. An applicant must have earned a bachelor's degree from an accredited institution in the United States or an equivalent degree from a recognized foreign institution. Official academic records must be submitted.

International applicants must provide evidence of proficiency in the English language prior to admission and/or full-time enrollment in the university. An applicant may satisfy university English proficiency requirements by obtaining a satisfactory score on the TOEFL. The university minimum TOEFL score requirement is 550 (paper-based), 213 (computer-based) or 80 (Internet-based); however, most graduate programs prefer a minimum TOEFL score of 600 (paper-based), 250 (computer-based) or 100 (Internet-based). Some graduate programs will accept satisfactory scores on the IELTS as evidence of English proficiency. The university minimum IELTS score requirement is 6.5, but most graduate programs prefer an IELTS score of 7.0 or higher.

As VCU does not generally provide financial support for graduate international students, applicants needing a student visa (F-1) or a visiting scholar visa (J-1) also must present documented evidence of available financial support to cover annual living and educational expenses while studying at VCU.

Bureau of Citizenship and Immigration Services regulations do not allow nonimmigrant students to study at VCU as special (nondegree-seeking) students. Proof of current visa type must be submitted with the application for applicants who are in the United States on student visas. F-1 students and J-1 visiting scholars admitted to VCU must submit copies of all immigration documents to the VCU International Student Adviser prior to enrolling in classes.

### **Immigrants (permanent residents, resident aliens and asylum/refugee applicants)**

Because immigrant applicants usually are in the United States at the time applications are submitted, these students are required to meet the same application deadlines as U.S. citizens.

If educated in the United States, immigrant students will be considered for admission under the same academic policies as those applied to U.S. citizens. If educated outside the United States, the same academic records are required as those for nonimmigrant students.

VCU requires detailed information concerning U.S. immigration status. Proof of permanent residency or application for permanent residency must be submitted with the admission application.

### **Application procedures**

Application forms and instructions for applying to all graduate programs are available on the Graduate School Web site at [http://www.vcu.edu/graduate/ps/apply\\_options.html](http://www.vcu.edu/graduate/ps/apply_options.html).

A \$50 nonrefundable application fee must accompany each application. This fee will not be credited toward tuition payment.

Completed applications and all supporting materials must be submitted directly to the Graduate School according to the application guidelines provided on the [Graduate School Web](#) site and before the program deadlines specified throughout this bulletin Web site. Late applications for some programs may be considered when possible but may require provisional action.

Graduate students are encouraged to initiate application to graduate study by using the [Graduate School's online graduate application](#). Supporting materials for online applications must be submitted promptly to the Graduate School. An application cannot be given final consideration until all required documentation has been received.

Students using the online application are encouraged to apply well before the program deadline to ensure receipt of all application materials.

Applications and supporting documentation submitted by mail should be addressed to the Graduate School, Virginia Commonwealth University, P.O. Box 843051, Richmond, VA 23284-3051. Applications submitted in person may be delivered to the Graduate School office at the Moseley House, 1001 Grove Ave.

Completed applications and supporting materials are reviewed by the graduate faculty of the intended program, and final official notification of acceptance is made by the dean of the Graduate School.

Admission to a graduate program may be contingent upon the successful completion of undergraduate coursework, degrees or other prerequisites that may be specified by the program or school. Remedial coursework will not apply toward a graduate degree.

Students who do not apply at least one month prior to the beginning of any semester risk their financial aid eligibility in the event that the admission process is not completed prior to the first day of classes.

[Apply](#)

### **APPLY**

### **General academic regulations for all graduate students**

It is the responsibility of all graduate students to be familiar with the Graduate Bulletin of record (the bulletin in effect at the time of official admission), as well as the academic regulations in individual school and department publications and on program Web sites; however, in all cases, the official policies and procedures of the University Graduate Council, as published on this Graduate Bulletin Web site and on the Graduate School Web site, take precedent over individual program policies and guidelines. Graduate students should contact the Graduate School at any time regarding questions relating to graduate study at VCU.

### **University rules and procedures**

Each member of the VCU community has certain responsibilities, rights and privileges. These are stated in some detail in the VCU Rules and Procedures, and all students are responsible for being familiar with provisions of this document. The rules and procedures are printed in the [VCU Resource Guide](#) and also are available at the Office of the Dean of Student Affairs. This document also provides for the process whereby disciplinary action, including separation from VCU, may be taken against a member of the university community as a result of behavior that is in

violation of the prohibited conduct as stated in the VCU Rules and Procedures.

VCU recognizes that honesty, truth, and integrity are values central to its mission as an institution of higher education. Therefore, all students are subject to the VCU Honor System. All graduate students are responsible for being familiar with provisions of this document, especially the section on Procedures for the Graduate and Professional Student Honor Council.

Graduate students at VCU have a right to appeal actions of an academic nature. If such action involves a course grade, the [Grade Review Procedures](#) should be followed. If such action involves computing, the [Computer and Network Resources Use Policy](#) should be followed.

In addition to those standards of conduct described in VCU Rules and Procedures and the VCU Honor System, students enrolled at the university may be dismissed from the academic programs in which they are enrolled for failure to meet prescribed academic program requirements. Students appealing terminations from their graduate degree programs/departments should first pursue appeals at the program/department and/or the school level. After receiving the program/department and/or school decision, students have the option of filing an appeal with the graduate dean in the process outlined in the [Appeal Process for Students Terminated from VCU Graduate Degree Programs](#).

VCU seeks to foster insight, imagination, creativity, resourcefulness, diligence, honesty and responsibility as well as the education of the men and women enrolled in its graduate programs. Such an enterprise can take place only where the highest standards of academic integrity exist.

Academic dishonesty is the giving, taking or presenting of information or material by students with the intent of unethically or fraudulently aiding themselves or others on any work that is to be considered in the determination of a grade or the completion of academic requirements. Students in doubt regarding any matter related to the standards of academic integrity in a given course or on a given assignment should consult with the faculty member responsible for the course before presenting the work.

### Effective bulletin

The bulletin of record for all graduate students is the Graduate Bulletin in effect at the time of official admission to their degree programs (as specified in the official letter of admission from the Graduate Dean). The effective bulletin contains the official requirements that students must complete to earn their degrees.

The [archived](#) copy of each bulletin reflects all policies and procedures in effect at the beginning of the stated academic year. The online Bulletin itself is updated regularly to reflect changes that occur throughout the academic year.

Students who do not maintain continuous enrollment (as defined in the effective bulletin) must reapply for admission and will be subject to the requirements of the bulletin in effect at the time of readmission. Exception to this policy must be recommended by the appropriate graduate program director and school dean and approved by the dean of the Graduate School.

### Degree requirements

The minimum course requirements, rules of admission to degree candidacy, language requirements, thesis or dissertation requirements, comprehensive examinations, transfer of credits, and the like are specified for each program in the individual program sections on this bulletin [Web site](#). Additionally, many schools, programs and departments maintain Web sites and publish special brochures, student manuals and program guides that may be requested from the appropriate dean or program director.

**In all cases, the official policies and procedures of the University Graduate Council, as published in the Graduate Bulletin and on the [Graduate School Web site](#), take precedent over individual program policies and guidelines.** Graduate students should contact the Graduate School with questions regarding any discrepancies.

### Advising program

Students are responsible for the proper completion of their academic programs. They must be familiar with the Graduate Bulletin, including general academic regulations promulgated by individual schools and departments.

The offices of the deans and department chairs, in cooperation with the advisers and faculty, endeavor to follow the academic progress of all students, and students are encouraged to seek counsel whenever there is a need. If advisers are unable to resolve problems satisfactorily, they will refer students to others as deemed appropriate and necessary.

In order to aid advising, students are responsible for maintaining current mailing addresses on file with the [Office of Records and Registration](#), as well as with the schools and departments in which they are enrolled.

Students also are required to obtain an official VCU student e-mail account within one week of the beginning of the first semester of enrollment and are responsible for reading in a timely fashion university-related communications sent to their official VCU student e-mail accounts. Information on how to set up an account is available online at <http://beech.vcu.edu/das/vmawebhome.nsf/webcontent/studentemail7>.

### Exceptions

Exceptions to graduate policies must be approved by the dean of the Graduate School. Requests for exceptions to Graduate School policies are to be made in writing by students to their graduate advisers. The advisers will forward their recommendations, along with copies of student requests and supporting documentation, to the dean of the Graduate School, who represents the University Graduate Council.

### Appeal process, students terminated from a VCU graduate program

1. Termination process
  1. Termination is initiated at the program/department level by advisers/graduate program directors/department chairs via a special action form indicating the reason with relevant documentation attached. Reasons for termination may include but are not limited to:
    - academic ("D" or "F" in class, too many grades of "C," as determined by the student's academic program in conjunction with Graduate Council policy, GPA below 3.0, failure of comprehensive exams, lack of progress on/unsuccessful defense of thesis/dissertation),
    - discontinuous enrollment,
    - exceeding time limit,
    - honor policy violation,
    - academic misconduct or
    - professional misconduct.
  2. Request for termination is forwarded to the school dean/dean's designee, who reviews the action, signs the form and forwards it to the graduate dean.



3. The graduate dean/dean's designee reviews the action, signs the form, notifies the Office of Records and Registration and sends a termination letter through certified mail to the student. This letter must include a statement of the student's right to appeal and inform the student that appeals must be initiated at the program/department and/or school level within 14 days after receipt of the letter.
2. Appeals process
  1. The student assumes the burden of proof in this appeal.
  2. The student should initiate the appeal process at the program level according to the program/department and/or school's appeals process. All program/department and/or school appeals processes should be exhausted prior to initiating an appeal to the graduate dean.
  3. If all program/department and/or school appeal processes fail to resolve the termination issue, the student must provide the graduate dean with written notification of appeal and reasons.
  4. The graduate dean provides the graduate program director and school/college dean with copies of the student's request and asks the graduate program director/dean/department chair to provide the Graduate School with their response, including copies of correspondence and any other supporting documentation that led to the termination. The graduate program director and school dean must respond to the graduate dean's request for information within 14 calendar days.
  5. The graduate dean notifies the student in writing through certified mail of the decision within 14 calendar days of receiving the information from the graduate program director and the school/college dean.
  6. The student may be allowed to register for courses with the understanding that he/she will be dropped retroactively if the termination is upheld. If the appeal is based on a grade appeal, the student may be allowed to register for courses for which the course in question is not a prerequisite.

## Student load

Student load is the total number of credits for which students are enrolled in any semester. Degree-seeking students may be either full time or part time, dependent upon program rules. Students who are fully funded as VCU graduate assistants with tuition remission are classified as "full time" during any semester in which they enroll for nine or more credits (six during the summer if funded on a 12-month stipend). Departmental requirements vary; therefore, funded students should verify expected course loads with their graduate program directors.

The maximum number of credits for which students may enroll in any semester without special permission is 15. More than 15 credits is an overload. More than 12 credits may result in increased tuition. Permission to enroll for more than 15 credits may be granted upon the written recommendation of the adviser, through departmental governance procedures, to the dean of the Graduate School.

Each summer course is designed to provide the equivalent of one semester's work. With careful scheduling, it is possible for students to earn as many as 15 credits during the summer if course work extends over the full summer semester calendar. Permission to enroll for more than 15 credits in the summer semester may be granted upon the written recommendation of the adviser through departmental governing procedures to the dean of the Graduate School.

Summer success is predicted on the academic standard of one credit per week. Six credits in five weeks or nine credits in eight weeks are considered a normal load, but VCU does not permit six credits in four weeks or nine credits in six weeks. Suggested scheduling combinations are printed in the Summer Schedule of Classes or are available online at <http://www.vcu.edu/schedule>.

## Attendance and enrollment policies

### Class attendance

Instructors are responsible for clearly informing students in writing of the attendance requirement for each course and the consequences of poor attendance. Students must abide by the requirements as announced in each separate class even though the requirements may vary widely among courses.

### Enrollment

Any person engaged in graduate study at VCU must enroll each semester in which he/she is engaged in any form of study at VCU that involves use of university facilities, laboratories/studios and/or libraries, or who is supervised by or consults with a faculty member concerning graduate work on a project, work of art, thesis or dissertation.

### Continuous enrollment for degree-seeking graduate students

#### Continuous enrollment – Pre-candidate

Once admitted to a degree program, a graduate student is expected to comply with minimum enrollment of one course per 12-month period from the beginning of his/her program.

#### Continuous enrollment – Candidate

A graduate student who has completed course requirements for a degree must register for at least one credit at VCU each fall and spring semester until the degree is awarded. Students must be enrolled during their graduation semesters.

### Residence for Ph.D. programs

At many universities, doctoral students are required to maintain at least one to two years of continuous full-time enrollment or "residence." At VCU, each doctoral program will establish its own residency requirements.

### Change in registration

Once students have registered for classes, changes in registration must be made according to the procedures listed below. Whenever students make any changes in registration, they should keep copies of their new schedules as verification of the changes. Changes in registration may affect financial aid. Students are advised to consult with a financial aid counselor before making any changes to their enrollment status. See the "Financial Aid" section of this chapter for detailed information.

### Cancellation of registration

To cancel registration, students must notify, in writing, the Office of Records and Registration before the end of the "Add-Drop" period, or drop all classes using the Web Registration System. Refunds are issued in accordance with procedures described under the refunds section of this chapter. For readmission guidelines, refer to the admissions section.

## Leave of absence and withdrawal policies

**Leave of absence.** Graduate students may request leaves of absence from their programs through written appeals to their advisers. The advisers will forward the requests, following departmental governance procedures, along with their recommendations and any supporting documentation to the dean of the Graduate School who will respond for the university.

**Requests for leaves of absence must be submitted before the effective date of the leaves.** Students who do not register for courses for more than one calendar year and who have not been granted approved leaves of absence by the graduate dean are out of compliance with continuous enrollment policy and must reapply for admission to VCU and to their graduate degree programs. **Graduate students with approved leaves of absence are exempted from continuous enrollment requirements for the LOA period. Students should note that while leaves of absence temporarily suspend continuous enrollment requirements, they do not extend time limits for completion of degrees.**

**Withdrawal from classes.** To withdraw officially from VCU courses, students must submit complete Official Withdrawal Forms to the Office of Records and Registration by the official withdrawal date as published in the official [VCU Calendar](#). The Official Withdrawal Form is obtained from the Office of Records and Registration (Monroe Park Campus: Founders Hall, Room 104; MCV Campus: Sanger Hall, Room 1-055). Students may also withdraw on line via VCU E-services. Failure to complete this process may result in the assignment of failing grades in all or some of the courses.

A grade of withdrawn ("W") will be recorded on the permanent student academic record for all courses from which students officially withdraw.

**Health-related withdrawals.** While graduate students are expected to work toward completion of their degrees without interruption, health-related problems may necessitate withdrawal from the university.

Some schools require a statement from a physician indicating the nature and severity of the condition, when a student should stop attending classes, and the estimated date of return to school.

In the event that a student's health problem poses a danger to the student, to patients or to others with whom the student may come in contact, and the student is unable or refuses to initiate steps to withdraw as stated above, administrative withdrawal of the student may be made by the dean of the Graduate School upon consultation with the appropriate faculty and a qualified physician.

Because curricular and course content changes may occur and a student's progress toward a degree may be affected adversely because of an extended absence, specific time periods may be imposed by individual schools with respect to the length of time allowed for absence from school. If there is a delay in return beyond the allotted time period without written consent of the dean of the Graduate School, the student may petition for return with advanced standing.

Some schools require that prior to return to school, the student must submit to the dean of the Graduate School a statement from a physician. This statement should document that the condition that necessitated the withdrawal has been corrected to a point where the student can complete successfully all curriculum requirements with reasonable accommodation including classroom, laboratory, clinical and fieldwork experience.

## Immunization requirements

VCU requires that all full-time students supply validated immunization records to University Student Health Services. This requirement must be completed prior to registering for second semester. Failure to meet these state law requirements will result in a hold placed on the student's second

semester registration. The hold can be removed only upon receipt of the student's documented records.

The immunization record must be completed fully and accurately and also must be accompanied by documentation that the vaccines were given. This completion may be done in several ways. For example:

1. students may have their physicians transfer the information from their medical records and sign the forms verifying their accuracy, or
2. students may complete the forms using information received from their local health departments or from the armed services, but they then must attach validated copies of supporting documentation.

Many high schools require validated immunization records from students. If students recently have graduated from high school, their immunization records may still be available. They may request that the high school provide them with a copy of their immunization records.

If students cannot provide documented evidence of full immunization according to VCU guidelines, then the students must see their family physicians or health departments and receive updated immunizations. Most city and county health departments offer immunization clinics (Richmond City Health Department, 500 N. 10th St., Room 114).

Immunity to the following diseases must be documented as specified on the forms supplied by the Graduate School with the formal offer of admission.

**Tetanus.** Documentation of (1) is requested. Documentation of (2) is required. (1) Primary immunization series, including month/day/year of each dose, and (2) Tetanus/diphtheria (Td) booster (month/day/year) within the past 10 years.

**Diphtheria.** Documentation of both (1) and (2) is requested. (1) Primary immunization series, including month/day/year of each dose, and (2) Tetanus/diphtheria (Td) booster, including month/day/year within the past 10 years.

**Polio.** (1) Primary immunization with a total of three doses of OPV (oral Sabin) or (2) primary immunization with a total of four doses of IPV (injected Salk). Note: Documentation of prior vaccination against polio, including month/day/year of each dose, is requested; however, if not completed in the past it is not recommended that the student complete the primary polio series unless the student is less than 18 years old or is planning travel to an area endemic or epidemic for polio.

**Rubeola (Measles).** Documentation of one of the following is necessary: (1) Born before 1957 and, therefore, considered immune, (2) two doses of the measles vaccine both administered after 1967 and given after the first birthday at least one month apart (document month/day/year), (3) physician's certification of diagnosis of measles including month and year of occurrence, or (4) documentation of immune titer proving immunity. Note: Measles vaccine given before 1968 is not acceptable.

**Mumps.** Documentation of one of the following is necessary: (1) mumps vaccine given after age one, month/day/year documented, (2) copy of report of immune titer, proving immunity, (3) physician's certification of diagnosis of mumps, including month and year of occurrence or (4) birth prior to 1957 (presumption of immunity).

**Rubella (German measles).** Documentation of one of the following is necessary: (1) Rubella vaccine given after one year of age (document month/day/year) or (2) copy of report of immune titer proving immunity. Note: A history of disease is not acceptable. Rubella vaccine given before June 9, 1969 is not acceptable.

**TB skin test (ppd)** must be performed at University Student Health

Service Office once student is attending classes.

**Meningococcal vaccine** is recommended to freshmen students residing in dormitories. The vaccine is available to any student wishing to reduce their risk for the disease.

Students with questions should contact the immunizations staff of [University Student Health Services](#).

### Change of graduate degree program

Students wishing to change to different graduate degree programs should obtain new application forms from the [Graduate School Web site](#). Students will have to submit new applications to the new programs with all materials required of applicants to that program. The dean of the Graduate School will work with the administrators of the two programs to facilitate the admission process for eligible students.

### Transfer credit

A maximum of one third of the didactic hours required for a master's degree or any graduate certificate program may be transferred from another VCU program or outside institution and, if not applied previously toward another degree, may be applied toward a degree. A maximum of 25 percent of course work other than research applied toward all doctoral programs at VCU may be transferred from another VCU program or outside institution if not previously applied toward another degree. Acceptance of transfer credit is made at the school level and reviewed and approved by the Graduate School. Individual schools/programs may have more stringent requirements.

All transfer work must be at the "A" or "B" grade level from an accredited institution or university. "Credit" or "pass" grades can be accepted only if approved by petitioning the Graduate Advisory Committee or equivalent of the student's school or college. Students must be in good standing both at VCU and at the institutions from which the credits were earned. Some programs will not accept credits earned as a nondegree-seeking graduate student for transfer. VCU will not accept credits that do not apply to a graduate degree at the offering institution for transfer, nor will it accept credits from unaccredited institutions for transfer.

### Degree candidacy

A graduate student admitted to a program or track requiring a final research project, work of art, thesis or dissertation, must qualify for continuing master's or doctoral status according to the degree candidacy requirements of the student's graduate program. Admission to degree candidacy, if applicable, is a formal statement by the graduate student's faculty regarding the student's academic achievements and the student's readiness to proceed to the final research phase of the degree program.

Degree candidacy requirements vary from program to program and may include but are not limited to such milestones as successful completion of all or a portion of all required didactic course work, the passing of written and/or oral comprehensive examinations, the identification of the thesis/dissertation adviser and/or committee, and/or the successful defense of the thesis/dissertation prospectus.

Upon satisfactory completion of degree candidacy requirements, the graduate student must submit a Graduate School [Notice of Admission to Master's or Doctoral Degree Candidacy](#) to his/her program director. The student's signature acknowledges that he/she has read and understands the policies regarding research involving human or animal subjects (Information on human and animal subjects can be found online at [www.orsp.vcu.edu/IRB-Home.htm](http://www.orsp.vcu.edu/IRB-Home.htm) and [www.orsp.vcu.edu/IACUC-Home.htm](http://www.orsp.vcu.edu/IACUC-Home.htm).) as well as [continuous enrollment requirements](#). Both the program director and the school's dean or dean's designee must sign the form to confirm the student's eligibility for

admission to degree candidacy and forward it to the graduate dean for final approval and recording of admission to degree candidacy. The graduate dean will formally notify the student of admission to degree candidacy.

A graduate student approved for degree candidacy must register for at least one graduate credit hour at VCU each fall and spring semester until the degree is awarded. Students must be enrolled during their graduation semesters. Graduate students with approved leaves of absence are exempted from continuous enrollment requirements for the LOA period. **Students should note that while a leave of absence temporarily suspends the continuous enrollment requirement, it does not extend the time limit for completion of the degree.**

### Thesis/dissertation examinations

The VCU Graduate School Thesis and Dissertation Manual, as developed by the University Graduate Council and VCU Libraries, serves as a guide for the preparation of the graduate theses and dissertations for graduate students in all programs within the university. The manual is available on the Graduate School Web site at <http://www.vcu.edu/graduate/es/thesis.html>.

General regulations applying to thesis/dissertation committees and competency examinations are as follows.

Graduate advisory committees shall be appointed for each master's degree candidate for whom there is a requirement to produce a thesis or its equivalent in the form of a research project, performance, exhibit or other production. The committee will coordinate and supervise the preparation of the thesis or its equivalent. The committee shall have a minimum of three faculty members, one of whom should be from a discipline other than the discipline of the candidate. The chair of the committee will be designated as the candidate's faculty adviser. Departments/program directors will appoint advisers for master's degree candidates for whom a thesis or its equivalent is not required.

A graduate dissertation committee shall be appointed for each doctoral candidate. The committee will have a minimum of four faculty members, including a chair, who will serve as the candidate's faculty adviser. At least two members must be from within the candidate's discipline and at least one from another discipline.

Upon satisfactory completion of all program requirements for admission to candidacy, doctoral matriculants will take written and/or oral comprehensive examinations administered by their major departments or schools. Successful completion of the examinations shall entitle students to advance to doctoral degree candidacy status. Candidates are then allowed to proceed with the research and preparation of their dissertations and any other doctoral degree requirements designated by their departments.

In the event of failure, students may be permitted to retake comprehensive examinations one time only. The re-examination requires the approval of the appropriate graduate program committee.

### Grades of satisfactory (S), unsatisfactory (U) or fail (F) in thesis and dissertation courses

All thesis and dissertation credits are to be graded each semester as satisfactory (S), unsatisfactory (U) or fail (F). There is no limit to the number of these credits a student may take while pursuing completion of the degree. Receipt of the grade of "U" is formal notification to the student of unsatisfactory progress. A student who receives a final grade of "F" in the thesis or dissertation will be terminated from the graduate program.

### Thesis/dissertation submission deadlines



All thesis/dissertation requirements must be completed no later than the Friday preceding the week before Commencement of the semester in which candidates plan to graduate, including:

- final defense of thesis/dissertation;
- signature sheet with all approval signatures, including the graduate dean's and, if applicable, documentation of IRB or IACUC approval number;
- submission of all required copies to VCU Libraries, with appropriate forms and fees, for binding and copywriting (if applicable), according to instructions in University Graduate Council's Thesis/Dissertation Manual and/or VCU Libraries Electronic Thesis/Dissertation procedures and program/school handbooks; and submission of the Survey of Earned Doctorates to the graduate dean (doctoral students only).

Students should contact their graduate program directors regarding internal schedules for submission of copy, defense and approval.

## Electronic theses and dissertations

Electronic Theses and Dissertations (ETDs) are digital representations of the traditional work completed by graduate students in partial fulfillment of requirements for graduate degrees. An ETD can be a simple textual document converted to a standard electronic format such as Adobe Portable Document Format (PDF) or a complex combination of images and formats.

Complete information about electronic theses and dissertations is available online at [http://www.vcu.edu/graduate/es/thesis\\_elec.html](http://www.vcu.edu/graduate/es/thesis_elec.html).

## Satisfactory academic progress

Students must continue to make satisfactory progress toward their degrees. Unsatisfactory grades and unprofessional conduct are areas that may warrant review for possible termination from their programs.

Specifically, students may not present courses receiving less than a "C" for fulfilling degree requirements.

At the end of each semester, graduate faculty advisers and program directors will review the academic progress of all graduate students in their programs. The academic standing of any graduate students who receive multiple grades of "C" or grades of "D" or "F" will be reviewed for possible termination from their programs. Although the grade of "U" is not included in the calculation of the graduate GPA, graduate students who receive one or more grades of "U" will be considered for possible termination.

## Time limit for completion of requirements and eligibility of courses

The time limit for a graduate degree will not extend beyond a period of seven years, which, at the master's level, includes five years with two possible one-year extensions that may be granted, upon written petition through the adviser or graduate program director, by the dean of the Graduate School.

Course work completed before matriculation and applied toward the degree, including course work at VCU and that transferred from other institutions, will be evaluated by the program/department to determine whether it can be used to fulfill degree requirements. For course work that was taken more than seven years prior to the completion of the VCU degree, the program/department will evaluate the course work for acceptability and report those courses deemed acceptable to the dean of

the Graduate School.

## Graduation requirements

Candidates for degrees are eligible for graduation upon completion of all academic requirements in effect at the time of the first registration, provided the students are continuously enrolled and provided the requirements are met within the time limit specified by the school or program. Students failing to satisfy the time requirement and who are readmitted to their programs shall satisfy requirements in effect at the time of readmission.

All degrees are conferred by the VCU Board of Visitors upon recommendation of the graduate faculty. Degrees are granted at the close of the semester or summer session in which students complete their work. Degrees will not be granted unless all financial obligations have been resolved with VCU's accounting office. No degrees will be conferred unless students make formal application for graduation. Students must be enrolled at the time of application (i.e., the semester in which students graduate).

Graduation applications must be submitted by students to their advisers or deans no later than the dates indicated in the university's academic calendars on the Web at [www.vcu.edu/academiccalendars](http://www.vcu.edu/academiccalendars). Students should schedule conferences with their advisers well ahead of the deadline and should note that the application requires the approval of the adviser, the department chair or the school director of graduate studies, and the school dean. **Credit is applicable toward only one degree unless students are admitted to a course of study that allows a defined number of shared courses.**

Graduate credit hours earned toward a VCU certificate may be applied to degree requirements for master's or Ph.D. programs. The determination of the acceptability of specific courses to be used for both the certificate and the graduate degree will be the responsibility of that master's or Ph.D. program or school.

## Graduation checklist

The total number of semester credits required for graduation depends upon the degree program. Specific information may be found under degree program descriptions. In addition to the specific requirements listed by the department, the following graduation checklist for graduate students, advisers and program directors summarizes all general requirements for graduation as determined by the University Graduate Council.

- Candidates enrolled at time of application/reapplication to graduate (i.e., semester in which candidates plan to graduate).
- Overall graduate GPA is greater than or equal to 3.0.
- Graduate GPA based on all graduate course work attempted after acceptance into program.
- For repeated courses, both original grade and repeat grades included in calculation of graduate GPA.
- No more than six credit hours or 20 percent of total credit hours attempted (whichever greater) at "C" or below level ("C," "D," "F").
- No course work approved for transfer below grade of "B"; no course work approved for transfer included in calculation of GPA.
- At least one half of required course work designated exclusively for graduate students (600 or higher at VCU).
- All Incompletes (I) converted to letter grade by last day of class of

semester in which candidate plans to graduate.

- All grades of Continued (CO), Progress (PR) and No Grade (NG) converted to letter grades by last day of class of semester in which candidate plans to graduate.
- All course work taken within prescribed time limits (master's, five years with two possible one-year extensions; Ph.D., seven years with any extensions approved by Graduate School).
- All requirements for thesis/dissertation (if applicable) completed by the deadline published in the [Academic Calendar](#) of the semester in which candidate plans to graduate, including
  - final defense of thesis/dissertation.
  - signature sheet with all approval signatures, including graduate dean's and, if applicable, documentation of IRB or IACUC approval number.
  - required copies submitted to VCU Libraries, with appropriate forms and fees, for binding, copywriting (if applicable), etc., according to instructions in University Graduate Council's Thesis/Dissertation Manual and/or VCU Libraries Electronic Thesis/Dissertation procedures and program/school handbooks. (Candidate should confirm with adviser/program director all internal schedules for submission of copy, defense and approval.)
  - submission of Survey of Earned Doctorates to graduate dean (doctoral students only).
- Students must settle all financial obligations with VCU Student Accounting Department.

## Application to graduate

At the beginning of each semester, all matriculated graduate students will receive an e-mail reminder from the Office of Records and Registration/Graduation Office to initiate the application to graduate process for the current semester.

The e-mail notification will be sent to the official VCU student e-mail address and will include submission deadlines and guidelines. (All graduate students in the School of Medicine are asked to complete a preliminary review before initiating the online E-services graduation checkout procedure and are referred to the School of Medicine guidelines or to their advisers/graduate program directors regarding application to graduate procedures.)

Students planning to graduate in the current semester should proceed.

- First to the E-services Web site to complete the online E-services portion of the graduation checkout procedure  
[https://iserver.adm.vcu.edu/AIS/STU/S\\_ESERV\\_HOME.html](https://iserver.adm.vcu.edu/AIS/STU/S_ESERV_HOME.html).
- The Graduation Forms Web site address to complete the Graduate School Application to Graduate according to the instructions provided for the completion and submission of documentation to advisers for review and approval [www.vcu.edu/enroll/forms/graduation](http://www.vcu.edu/enroll/forms/graduation). (These forms are provided in PDF format so that students can complete the forms online and print them. Adobe Acrobat Reader is required.) A separate set of graduation forms must be completed and submitted for each program from which students intend to graduate.

The Graduate School Application to Graduate consists of:

- instructions for students and advisers regarding submission of documentation and the approval process, including a checklist summarizing academic policies and requirements for graduation as determined by the University Graduate Council and articulated in the Graduate Studies at VCU section of the Graduate Bulletin.
- an approval sheet, requiring both preliminary and final reviews/approvals (and indicating the process by which advisers can notify Records and Registration/Graduation Office if students do not complete their programs of study by the end of the current semester).
- directions for completing Commencement Program/Diploma Information. (This information must be submitted no later than the deadlines provided in the e-mail notification to students in order to ensure inclusion in the appropriate Commencement Programs.)
- an optional Graduation Worksheet. (Students should check with their advisers/graduate program directors to see if they are required to complete the optional graduation worksheet.)

Students are reminded to complete a final check of their academic records before they exit the university to ensure that all temporary grades have been converted, that the record accurately reflects their academic histories and that all degrees have been posted.

Detailed information about the application to graduate process for graduate students and guidelines for graduate program directors/advisors are available on the Graduate School Web site at [www.vcu.edu/graduate/es/graduation.html](http://www.vcu.edu/graduate/es/graduation.html).

## Reapplying for graduation

Candidates who do not graduate at the end of the semester for which they have applied must reregister and reapply. Students must be enrolled at the time of application/reapplication (i.e., the semester in which the student graduates).

## Commencement

Graduate students are encouraged to visit the [Graduate School Web site](#) for information about university Graduate School events and activities for May and December commencement ceremonies. Students also are encouraged to visit the [VCU Commencement Web site](#).

## Time limit for completion of requirements and eligibility of courses

The time limit for a graduate degree will not extend beyond a period of seven years, which, at the master's level, includes five years with two possible one-year extensions that may be granted, upon written petition through the adviser or graduate program director, by the dean of the Graduate School.

Course work completed before matriculation and applied toward the degree, including course work at VCU and that transferred from other institutions, will be evaluated by the program/department to determine whether it can be used to fulfill degree requirements. For course work that was taken more than seven years prior to the completion of the VCU degree, the program/department will evaluate the course work for acceptability and report those courses deemed acceptable to the dean of the Graduate School.

## Grades

## Grade reports

Final grade reports are sent to students at the end of each semester. Grade reports are mailed to the official mailing address on file. Students must submit in writing any change of address to the Office of Records and Registration, P.O. Box 842520, Richmond, VA 23284-2520.

## Transcripts

Official transcripts of students' academic records will be issued only by the Office of Records and Registration upon written request of the students. Transcripts given directly to students do not carry the university seal and are not official. The seal is attached when the transcript is mailed directly from the university to the receiving party.

## Repeated courses

Students receiving grades below "B" shall repeat a course only upon the advice of their program directors. **Both the original grade and the repeat grade shall be included in the calculation of the graduate GPA.**

## Grade review procedure

If a student thinks that a grade is inaccurate, the situation should be discussed with the faculty member. This will allow the faculty member to explain how the final grade was determined and, if an error is detected, to submit a change of grade.

If the student still thinks that the grade was assigned unfairly, a written appeal should be submitted to the department chair. Upon receipt of the written appeal, the department chair shall provide the student with a copy and explanation of the [Grade Review Procedure](#) and shall ensure that the requirements of the Grade Review Procedure are followed.

If the department chair is unable to resolve the complaint, then the dean of the school in which the course was offered will form a grade review committee as described in the Grade Review Procedure policy and will submit its decision to the dean of the school. **The decision communicated by the dean of the school in which the program resides is the final decision** that will be distributed to the student, faculty member(s) and department chair.

In cases concerning grades awarded for the fall semester, the written appeal must be submitted to the department chair no later than 14 calendar days after the beginning of the following spring semester. In cases concerning grades awarded for the spring semester or summer sessions, the written appeal must be submitted no later than 14 calendar days after the beginning of the following fall semester.

## Grading system

Work quality is measured by the four-point grade system with the following equivalents:

Grade symbol and meaning	Grade-point value per semester credit
A	4.0
B	3.0
C	2.0
D	1.0
F	0.0
P/F (Pass/Fail)	0.0

PR (Progress)	0.0
S/U (Satisfactory/Unsatisfactory)	0.0

All other grades are temporary, carry no credit and are not used in the computation of a GPA.

**Specifically, students may not present courses receiving less than "C" for fulfilling degree requirements.**

Refer to the grading explanations below for the use of the grades of "satisfactory" and "unsatisfactory" in relation to thesis/dissertation classes.

The number of grade points earned is computed by multiplying the grade-point value for the letter grade by the number of semester credits for the course. As an example, a student receiving an "A" (i.e., four grade points) in a three-credit course receives 12 grade points.

The grades of accepted transfer courses are not included in the computation of the VCU GPA.

Graduate students are not designated as special honors graduates (i.e., cum laude, magna cum laude, summa cum laude) on transcripts or diplomas upon completion of their programs.

No degree credit for remedial work shall be awarded to graduate students. Graduate students advised to take any level course for remedial work should be notified in writing that the course credit shall not apply to the degrees they are pursuing. Other bodies may rule later, should students wish to apply the credit to some other degree.

### Grade of audit (AU)

Class size permitting, students may register for courses on an audit basis. **Students may register for audit only during add/drop and late registration periods as a new registration and not as a change from credit to audit.** Auditing a course means students enroll in courses, but do not receive academic credit upon completion of the courses. Students who register on an audit basis are subject to attendance regulations of that class and may be administratively withdrawn by instructors for a violation of class requirements for audit students, before or after the normal withdrawal deadline as posted on the [VCU Calendar](#). Students who register for audit may be subject to other course requirements at the discretion of the instructors. Audit students are charged the regular rate of tuition and fees. An audit course is counted as part of students' semester load in terms of classification as full-time students. Courses taken for audit, however, do not satisfy minimum enrollment requirements for students receiving graduate teaching or research assistantships, graduate fellowships, or university graduate scholarships.

### Grade of continued (CO)

The grade of "CO" may be assigned as an interim grade for those courses that run over several grade reporting periods. The "CO" indicates that the course is not expected to be completed in a single semester and that students must reregister for the course. Upon completion of the course, a final grade will be assigned to the current semester, and the previous "CO" grade(s) will remain. This grade may be assigned only in courses approved for such grading.

### Grade of incomplete (I)

If because of circumstances beyond their control, students are unable to meet all the requirements of a course by the end of a semester, the mark of incomplete ("I") may be given. The awarding of a mark of "I" requires an understanding between instructor and student as to when and how the course will be completed. This understanding must be recorded on an Incomplete Grade Assignment Form that is submitted instead of a final course grade. The maximum time limit for submission of all course work necessary for removal of an incomplete is the end of the last day of classes of the next semester following the semester in which the incomplete was incurred (i.e., an incomplete awarded in the fall semester

must be converted by the last day of classes in the spring semester, and an incomplete awarded in the spring or summer session must be converted by the last day of classes in the fall semester). At that time, an unremoved grade of incomplete is changed automatically to a failing grade. Individual departments and schools may have more stringent time limits. An extension of the time limit is possible, but must be approved, prior to the expiration date stated above, by the instructor and the dean of the school through which the course is offered. Written approval indicating the new time limit must be filed with the dean of the Graduate School.

#### **Grade of pass (P)**

This grade is awarded for certain courses to denote satisfactory completion of requirements. Courses assigned the grade of "P" will not be computed in the GPA.

#### **Grade of progress (PR)**

The mark of "PR" may be assigned only in courses approved for such grading. Unlike the mark of "I," "PR" will not automatically be changed to a failing grade at the end of the succeeding semester.

#### **Grades of satisfactory (S), unsatisfactory (U) or fail (F) in thesis and dissertation courses**

All thesis and dissertation credits are to be graded each semester as satisfactory (S), unsatisfactory (U) or fail (F). There is no limit to the number of these credits a student may take while pursuing completion of the degree. Receipt of the grade of "U" is formal notification to the student of unsatisfactory progress. A student who receives a final grade of "F" in the thesis or dissertation will be terminated from the graduate program.

#### **Grade of withdrawal (W)**

The grade of "W" indicates that the student has officially withdrawn from a course or has been administratively withdrawn for nonattendance. **No student who has officially withdrawn from a course or who has been administratively withdrawn for nonattendance may attend subsequent meetings of the course.**

#### **Course listings**

#### **Identification of symbols**

- I A course offered in the first semester
- II A course offered in the second semester
- I, II A course offered in each semester
- I and IIA course continued through two semesters
- S A course offered in summer sessions

#### **Course interpretation**

A single number listing for a course, such as MGMT 648, indicates that it is a one-semester course and may be offered each semester or only one semester each year.

Courses listed with a double number, such as THEA 603, 604 and designated as semester courses, consist of two one-semester courses, either semester of which may be taken without the other.

Courses listed with a double number, such as APPM 575-576, are designated as continuous courses and consist of two one-semester courses, the first of which can be taken without the second, but the second of which can-not be taken without the successful completion of the first.

The university reserves the right to withdraw any course or program.

#### **Course numbering**

All schools and programs within VCU use the following course numbering system. All course numbers consist of three digits (XXX). The first digit relates to the course level as follows:

#### **0XX noncredit courses**

Courses offered for students to make up deficiencies in previous training or to improve certain basic skills.

#### **1XX and 2XX undergraduate, lower level**

Courses with these numbers are offered primarily for undergraduate students and may not be used for graduate credit, although graduate students may be required to register for courses at this level to gain a necessary foundation for other course work.

#### **3XX and 4XX undergraduate, upper level**

Courses offered for advanced undergraduates and usually constitute the major portion of specific program work leading to the baccalaureate degree. On occasion, graduate students will be advised by their graduate advisers to enroll in prerequisite 4XX courses. Graduate programs can require that 400-level courses be taken, but credit hours in these courses cannot count toward the graduate degree or in the graduate GPA (effective fall 2004).

#### **5XX introductory graduate courses**

Graduate students enroll for credit in these courses through the normal graduate advising system. Departments may limit the number of 500-level courses applicable to a graduate degree program. Advanced undergraduates may enroll in these courses for credit with consent of the offering department. Credit is applicable toward only one degree unless a student is admitted to a course of study that allows a defined number of shared courses.

#### **5XX professional graduate courses**

First year, first professional (medicine, dentistry, pharmacy and physical therapy) courses normally open to students enrolled in the M.D., D.D.S., Pharm.D. and D.P.T. programs. Certain courses of this group may be designated by the department and approved by the University Graduate Council for graduate credit.

#### **6XX, 7XX and 8XX graduate courses**

Graduate students enroll for credit in these courses through the normal graduate advising system. Credit is applicable toward only one degree unless a student is admitted to a course of study that allows a defined number of shared courses.

#### **6XX and 7XX professional graduate courses**

6XX Second year, first professional (medicine, dentistry, pharmacy and physical therapy [second and third year]) courses normally open only to students enrolled in the M.D., D.D.S., Pharm.D. and D.P.T. programs. Certain courses of this group may be designated by the department and approved by the Graduate Council for graduate credit.

7XX Third and fourth year, first professional (medicine, dentistry and pharmacy) courses normally open only to students enrolled in the M.D., D.D.S. and Pharm.D. programs. Certain courses of this group may be designated by the department and approved by the Graduate Council for graduate credit.

#### **Graduate tuition and student fees**

Students must pay all applicable tuition, housing and dining charges, and other fees when due, as described in this section. Students who fail to pay these charges on time may be assessed a late payment fee. The university reserves the right to revise or alter all tuition and fees, regulations pertaining to student fees, and collection procedures at any time. In addition to expenses billed by the university, students should make allowances for books, clothing, supplies, travel and other out-of-pocket costs when figuring their total yearly expenses at the university.

## Student financial responsibilities

Students who enroll are responsible for:

- full payment of tuition and fees generated from their registration.
- full payment of all charges for housing and dining services, and other applicable miscellaneous charges.
- keeping a current permanent mailing address on file with the Office of Records and Registration. Failure to receive an invoice because of an incorrect address does not relieve responsibility for timely payments.
- establishing an official VCU e-mail address and reading their e-mail on a regular basis, since e-mail will be used by faculty and university offices to deliver important communications.

## Full-time and part-time graduate study

Graduate students registered for nine to 15 credit hours are considered full time and are charged a flat rate for tuition and fees. Graduate students registered for more than 15 credit hours during any semester will be charged an overload tuition fee on a per-credit-hour basis above the full-time tuition rate. Graduate students registered for fewer than nine credit hours are charged a per-credit-hour rate. Graduate students fully funded as graduate assistants or graduate fellows with tuition remission must register for at least nine credit hours per semester (six credit hours during the summer if funded on a 12-month stipend). Departmental requirements may vary; therefore, students should verify expected course loads with their graduate program directors.

Special students who hold bachelor's degrees are classified as DHG (degree-holder graduate) if they enroll in one or more graduate courses. DHG students are charged by the level of the course unless they enroll for nine or more credits, at which point they are charged at the full-time graduate rate.

## Tuition and fee schedule

Tuition and fees are categorized and described on the student accounting Web site at [www.vcu.edu/enroll/sa/tuition](http://www.vcu.edu/enroll/sa/tuition). Questions regarding tuition and fees may be directed to the Student Accounting Department at (804) 828-2228, or by e-mailing [stuacctg@vcu.edu](mailto:stuacctg@vcu.edu). All charges are subject to change by decision of the Board of Visitors.

## University fee

This fee is used by the university to support student facilities, campus development, intercollegiate athletics and other programs. Full-time students pay a flat-rate university fee each semester. Part-time students pay this fee on a per-credit basis.

## Student activity fee

This fee is used to support social, cultural and other student activities on the Monroe Park Campus. These activities include concerts, plays, student organizations and publications. Full-time students on the Monroe Park Campus pay a flat-rate student activity fee, while part-time students on the same campus pay this fee on a per-credit basis. Students on the MCV Campus are not charged this fee.

## Student Government Association fee

This fee is used to support social, cultural and other student activities on the MCV Campus. The fee is charged to all full-time and part-time MCV Campus students. Monroe Park Campus students are not charged this fee.

## Student health fee

All full-time students on both campuses must pay the student health fee. Part-time students may participate in the University Student Health Services on an elective basis by paying the student health fee. The University Student Health Services offers unlimited office visits for the diagnosis and treatment of acute and chronic illnesses. The fee does not cover accidental injury and hospitalization. The fee is used to cover operating costs for the University Student Health Services.

## Technology fee

The technology fee is charged to all undergraduate, graduate and professional students in all programs. Full-time students pay a flat rate. Part-time students pay a per-credit-hour rate. The fee is used to provide for students' technological needs and to support university-wide technological initiatives.

## Off-campus fees

The university fee, the student activity fee, the student government association fee (except School of Social Work) and the student health fee are not charged to students taking off-campus classes.

## Capital Outlay Fee

This fee is charged to all full-time and part-time non-resident, on-campus students. The fee is mandated by the General Assembly to reimburse the State for debt service costs attributable to non-resident students related to the financing of buildings and equipment.

## Special fee charges

Because of specialized programs, various schools and departments may charge each student additional fees to cover special materials, equipment breakage and other costs. For specific information about special fees, refer to the Student Accounting Department Web site or to the specific school or department section in this bulletin.

## Student billing

The Student Accounting Department issues bills to students showing charges for the following fees: tuition, student activity fee, student government association fee, technology fee, university fee, capital outlay fee, private music lessons, school major fees, lab fees, special course fees, instructional support fees, dental kits, disability insurance, housing and dining services, communication fees, student health fee and study abroad fees.

Tuition and fees for preregistered students, along with charges for housing and dining services where applicable, are due by the beginning of each semester. All other students will be billed after the registration period and should pay upon receipt of the invoice.

Students who have sufficient financial aid to cover their charges will not be sent bills. Students with current charges of \$100 or more are eligible to participate in the university's Installment Payment Plan, offered during the



fall and spring semesters. The Installment Payment Plan distributes the cost of tuition, fees, room and board, and communications fee for the semester into four equal installments. The fee per semester is \$25, paid with the first installment. An application and information about how to sign up for the payment plan will be included with the bill.

### Drop vs. withdraw

Drop charges are removed to indicate that the student never attended the class. The student is not eligible to receive financial aid, and any financial aid already credited to the student's account based on the original course registration will be removed from the student's account, which may create a balance due to the university.

Withdraw results in the academic grade of "W." Charges are assessed and adjusted according to the University Refund Policy. Students may owe a balance to the university.

### Refund of tuition and fees

The official university tuition and fee policy, applicable for the fall and spring semesters only (excluding short courses), is outlined below. Refunds are calculated on a course-by-course (per-credit-hour) basis, disregarding the full-time cap amounts. Students who are enrolled full-time and withdraw from courses may not receive a refund.

- Students dropping/withdrawing from courses through the first week of class will be entitled to a 100 percent refund of tuition and fees.
- Students withdrawing from courses through the second week of class may be entitled to an 80 percent refund of tuition and the university fee.
- Students withdrawing from courses through the third week of class may be entitled to a 60 percent refund of tuition and the university fee.
- Students withdrawing from courses through the fourth week of class may be entitled to a 40 percent refund of tuition and the university fee.
- Students withdrawing from courses after the fourth week of class are not entitled to receive a refund of tuition and fees.

Students in off-campus courses are subject to the same refund policy as all other university students if the class is scheduled on the regular semester schedule. If the off-campus course is shorter or longer than the academic semester, the refund dates are adjusted accordingly at the request of the Off-campus Programs Office.

The refund policy and deadlines of the English Language Program (ELP) are different from the university's refund policy for academic courses. Details of the policy may be obtained from the English Language Program Office.

A full refund for Holiday Intersession will be granted if the course is dropped before 4:30 p.m. on the day of the first class meeting. Partial refunds are not granted.

A full refund for summer tuition and applicable fees will be granted if the course is dropped no later than the day following the first day of a given class. (This policy also is applicable if the class does not meet on two consecutive days.) Students reducing their academic course loads to fewer than full time (12 credits for undergraduates and nine credits for graduates) before the end of the last day to drop a course will be entitled to a refund of tuition and applicable fees reflecting the reduced course load. Partial refunds are not granted for the summer session. This same refund policy also applies to short courses offered during the fall and spring semesters.

Students who are financial aid recipients and withdraw from all courses prior to completing 60 percent of the semester are subject to the Federal Return of Title IV Funds Policy. For more details see Federal Financial Aid Refund Policy.

Refunds will be computed based on the actual withdrawal date certified by the Office of Records and Registration. Refunds will not be made to students who do not attend classes and have not completed the required withdrawal procedure. Refund processing may take approximately two to three weeks. Exceptions to this refund policy are made only in rare instances. Written application for an exception must be filed in the Student Accounting Department to the Refund Appeals Committee within three years.

Refer to the Residential Housing contract and Dining Services' "Terms and Conditions" for housing and dining services refunds.

Requests for refunds that are not generated from the overpayment of financial aid should be made in writing to: VCU Student Accounting Department, P.O. Box 843036, Richmond, VA 23284-3036. Refund request forms are available at the Student Services Centers, 827 W. Franklin St., Room 104 or 1101 E. Marshall St., Room 1-055.

In accordance with credit card regulations, the university will refund any credit balance that may result on a student's account as the outcome of a credit card payment back to the credit card account. The remaining credit balance, if any, will be refunded to the student.

Students are responsible for paying any increase in charges that may occur after the generation of any refund.

### Outstanding charges

Students who fail to meet payments when due will be assessed late payment penalties and will be denied registration for future classes until they have paid all accrued amounts owed. Students with balances owed to the university will not be issued degrees, official transcripts of grades or graduate reports until all charges are paid in full.

Any communication disputing an amount owed, including an instrument tendered as full satisfaction of a debt, must be submitted to the Director of Student Accounting, Student Accounting Department, Virginia Commonwealth University, P.O. Box 843036, Richmond, VA 23284-3036.

Pursuant to Section 2.2-4805 et seq., of the Code of Virginia, and in accordance with rules and regulations promulgated by the State Comptroller and Attorney General of the commonwealth of Virginia, VCU will charge interest, costs and fees on all accounts past due.

VCU is participating in the Virginia Set-off Debt Collection Act of 1981. Under the provisions of this act, a Virginia individual income tax refund will be subject to the university's claim for unpaid balances of tuition and fees.

A student who pays a past due balance with a dishonored check may be subject to having his or her current and/or future registration cancelled. A charge is levied for all dishonored checks.

### Defense crisis tuition relief, refund and reinstatement guidelines

These guidelines apply to any operation, including a defense crisis, in which the president of the United States declares a sudden mobilization that includes members of the Virginia National Guard or the active or reserve forces of the U.S. Armed Forces who are students enrolled at VCU. Students are offered the following enrollment secession options:

1. Drop all courses before the end of the add/drop period and receive a full refund of all funds paid the university. Students will be asked to sign the drop request form with the registrar indicating that they are

not receiving a financial aid refund. (This option might best meet the needs of students who are called to active duty service during the first week of school and did not receive a financial aid refund check or direct deposit.)

2. Receive a grade of Incomplete (IM – incomplete military) in one or all courses. Students residing in university housing will be released from their housing and dining contracts and will receive a prorated refund of these charges. Students who chose to take a grade of IM will not have tuition and fees reduced for these courses because credits will still be earned for the semester. Students will have 12 months from the date that they leave the university to complete the course work and earn a course grade. (This option might best meet the needs of students who have essentially completed all course work in a class for the semester, but have yet to turn in a final project, an exam or other materials. It should be agreed upon between the instructor and the student that the remaining course work can reasonably be completed during the upcoming 12-month period.)
3. Accept administrative withdrawal (WM – withdrawal military) from all courses as of the effective date of the orders to active duty. If this option is elected, a full refund of all tuition, fees and prorated room/dining charges will be made. If a student received financial aid, the amount recovered to the financial aid accounts will follow Title IV guidelines. (This option might best meet the needs of students who are called to national service in the middle of a semester and have not completed 90 percent of their class requirements. This option also might best meet the needs of students who are leaving the university during the first week of class and received a financial aid refund check or direct deposit as a result of their financial aid.)

## Leaving the university

To initiate this process, the student must provide the university registrar with a copy of his/her active duty orders in addition to a printed copy of his/her course registration for that semester and indicate Option 1, 2 or 3 for each course. The university registrar will take the appropriate enrollment action, post the appropriate grades and send a copy of the orders and a copy of the student course request statement to the director of financial aid and the director of student accounting.

## Returning to the university

If the student returns within one year of completing their national emergency service requirement, the student may return to the university in the same program of studies without reapplying for admission. The student should begin the re-enrollment process by writing to the director of admissions regarding their intent to re-enroll.

## Tuition determination and student classification

Tuition is determined by the number of credit hours a student is taking, the student's residency classification, course of study and classification level.

## In-state residency

Eligibility for in-state tuition benefits is determined by Section 23-7.4 of the Code of Virginia. Refer to the Determination of Student Classification for

In-state Tuition Purposes in the [Welcome](#) section of this bulletin for the complete code.

All applicants to VCU who want to be classified as Virginia residents must complete the Application for Virginia In-state Tuition Rates included in the graduate application. The residency determination of the applicant will be conveyed at the time of admission. New students who have been classified initially as non-Virginians for tuition purposes may request a review of the initial residency determination by contacting Records and Registration/Residency, (804) 828-0366. The residency officer may request that the applicant complete a Student Supplemental Application for Virginia In-state Tuition Rates and submit supporting documents for additional clarification. Continuing students who want a change of residency status to in-state tuition rates must submit the supplemental application along with supporting documentation. Requests and applications for a second review must be submitted to the residency officer by the last day of add/drop week for each semester; however, it is strongly recommended that applications be submitted by the appropriate deadline: fall semester, Aug. 1; spring semester, Dec. 1; summer session, May 1.

Students will be notified by mail of decisions regarding residency status. The Office of Financial Aid and the Student Accounting Department also will receive official notification of residency decisions. Any denial for a change in residency status will include procedures for appeal of the intermediate decision. Students who submit fraudulent applications, falsify documentation or conceal information will be subject to reclassification, payment of all nonresident fees owed and university discipline.

## Need-based financial aid for graduate students

Current information on financial aid programs, policies and procedures are available on the VCU Web site at <http://www.vcu.edu/enroll/finaid>. To obtain printed materials or additional information, call or visit the appropriate financial aid office listed.

### Monroe Park Campus programs

Ginter House  
Shafer Court Entrance  
901 W. Franklin St., P.O. Box 843026  
Richmond, VA 23284-3026  
(804) 828-6669  
Fax: (804) 827-0060  
E-mail: [faidmail@vcu.edu](mailto:faidmail@vcu.edu)

### Schools of Allied Health Professions, Nursing and Pharmacy

Sanger Hall, Room 1-055  
1101 E. Marshall St., P.O. Box 980244  
Richmond, VA 23298-0244  
(804) 828-9800  
Fax: (804) 828-2703

### School of Dentistry

Lyons Building, Room 309  
520 N. 12th St., P.O. Box 980566  
Richmond, VA 23298-0566  
(804) 828-9953  
Fax: (804) 828-5288

### School of Medicine

Sanger Hall, Room 1-008  
1101 E. Marshall St., P.O. Box 980565  
Richmond, VA 23298-0565  
(804) 828-4006  
Fax: (804) 827-5555

## eServices – online records access

Students are encouraged to use eServices, a password-protected service



for viewing VCU student records online, to check the status of their financial aid application and award package. Students also may register for classes, print bills and more. The eServices Web site is located at [https://iserver.adm.vcu.edu/AIS/STU/S\\_ESERV\\_HOME.html](https://iserver.adm.vcu.edu/AIS/STU/S_ESERV_HOME.html).

### E-mail – official method of communication

Students are required to obtain an official VCU student e-mail account within one week of the beginning of their first semester of enrollment. Students are responsible for reading in a timely fashion university-related communications sent to their official VCU student e-mail account. The Office of Financial Aid uses e-mail to provide financial aid information, to request documentation to support financial aid application data and to provide financial aid application status and award information. Information on how to set up an account is available online (go to the “Academic” section of “Computer Accounts” at [http://www.vcu.edu/it/computer\\_accounts.html](http://www.vcu.edu/it/computer_accounts.html)).

### Identification requirements

Students must provide picture identification, preferably a VCU Card, for in-person access to financial aid records. For the student’s protection, information provided over the telephone and e-mail may be limited if the financial aid staff member is not confident of the student’s identity.

### Eligibility for financial aid

Most students are eligible for some type of financial aid regardless of family financial circumstances. Basically, to receive aid from any of the federal or state student aid programs, students must:

- submit a Free Application for Federal Student Aid (FAFSA) or Renewal FAFSA designating VCU (school code 003735) to receive FAFSA results,
- demonstrate financial need, except for some loan programs,
- have a high school diploma or a General Education Development (GED) Certificate,
- be enrolled or accepted for enrollment to an eligible degree or certificate program,
- be enrolled at least half time (five or more graduate credit hours),
- be a U.S. citizen or eligible noncitizen,
- have a valid Social Security number (unless from the Republic of the Marshall Islands, the Federated States of Micronesia or the Republic of Palau),
- meet Reasonable Academic Progress (RAP) standards as defined by the VCU Office of Financial Aid (the full VCU RAP policy is available on the Web at <http://www.vcu.edu/enroll/finaid>),
- certify that federal and state financial aid will be used for educational purposes only,
- not be in default on a federal student loan and not owe money on a federal student grant,
- comply with the Selective Service registration, if required, and
- not be convicted under federal or state law of sale or possession of illegal drugs.

Detailed information can be found in the federal Student Guide, available in print form from the VCU Office of Financial Aid or electronically

([http://studentaid.ed.gov/students/publications/student\\_guide/index.html](http://studentaid.ed.gov/students/publications/student_guide/index.html)) and on the VCU Office of Financial Aid Web site (<http://www.vcu.edu/enroll/finaid>).

### Applying for financial aid

The financial aid application process for the academic year begins Jan. 1. All students are encouraged to complete and submit the FAFSA as soon as possible after Jan. 1, designating VCU (school code 003735) to receive the results. In order to reduce problems, errors and omissions on the FAFSA, students are encouraged to apply electronically using FAFSA on the Web (available online at <http://www.fafsa.ed.gov>). Once the FAFSA is filed, the federal processor will send the student a Student Aid Report (SAR) or electronic SAR Acknowledgement, and also will electronically send the information to the VCU Office of Financial Aid, if VCU was listed as a school to receive the data. If additional information is needed to complete processing of the application, the VCU Office of Financial Aid will send the student a request for additional information. Responding promptly to such requests will ensure timely processing of the application. Once the review of FAFSA data has been completed, the Office of Financial Aid will send the student a Financial Aid Award Notification.

Please note that health profession students (dentistry, medicine, nursing or pharmacy) must provide both student and parental information on the FAFSA to apply and receive consideration for Title VII grants and loans from the Department of Health and Human Services.

### Priority filing dates

The VCU Office of Financial Aid recommends electronically filing the FAFSA by March 1\*. Students should complete the FAFSA using data from their completed tax returns. If necessary, they may use estimated tax return data in order to meet the VCU priority filing date but should be prepared to submit a copy of their completed tax returns and W2 forms to VCU as soon as possible. Students will receive their Financial Aid Award Notification after their FAFSA application data has been verified. If students have not applied for financial aid in a timely manner, they may want to participate in the VCU Installment Payment Plan, which budgets each semester’s bill over four payments. Information about this plan can be found on the Student Accounting Department’s Web site (<http://www.vcu.edu/enroll/sa/payment/ipp.html>).

\* Students who do not have access to the Web may apply using the paper FAFSA, available through VCU, high schools, colleges and most public libraries. Those students completing a paper application should mail it to the federal processor by Feb. 1.

### Summer studies

Limited financial aid may be available during the summer semester. Students applying for the summer semester must file the FAFSA by March 1. Students interested in financial aid for the summer semester should obtain a VCU Summer Studies [Schedule of Classes](#) (available in March) for more details.

### Study abroad

Financial assistance is available to eligible students enrolled in approved study abroad programs. All study abroad programs must be coordinated through the Office of International Education at (804) 828-8471. Students should work with a financial aid counselor to coordinate aid for their study abroad program. Information about financial aid and study abroad is available online at [http://www.vcu.edu/oie/eao/w\\_intro.html](http://www.vcu.edu/oie/eao/w_intro.html).

### Quality assurance

To ensure that information provided on the FAFSA is accurate, a student’s application may be selected for review at any time during an enrollment

period, and the student will be requested to provide documentation that supports the information. By signing the FAFSA, the student (and the student's parents or spouse, if applicable) agreed to furnish such documentation. If the documentation is not provided when requested, financial aid awards will be canceled and any funds already disbursed may need to be repaid.

### University bill

The Student Accounting Department sends bills for tuition, fees and other university charges to students whose financial aid will not cover their university charges. When financial aid awards (grants, scholarships and loans) are not enough to pay university charges, the remaining balance must be paid from personal funds, credit card or the VCU Installment Payment Plan. Federal work-study awards will not be deducted from university charges because those funds are paid directly to the student, based on hours worked. Any outstanding balance owed will hold a student from registration for courses.

### Financial aid appeals

Financial aid eligibility decisions are made using federal, state and institutional regulations and policies. Students may appeal their eligibility if special circumstances warrant a review. Reasons for an appeal might include one of the following documented unusual circumstances:

- loss or reduction of employment earnings,
- disability or death of parent or spouse,
- separation or divorce,
- loss or reduction of untaxed income,
- losses due to a natural disaster,
- unusually high educational program costs,
- unusual medical expenses and/or
- dependent and child care expenses.

Any financial aid staff member can advise a student about the procedures on how to file an appeal.

### Federal financial aid refund policy

Students who receive federal Title IV grant or loan assistance and withdraw from VCU before completing 60 percent of the semester (as measured in calendar days) must have their eligibility recalculated based on the federal Return of Title IV Funds formula. This federal formula specifies that a student's financial aid eligibility must be recalculated based on the aid the student has "earned" (based on the number of days that the student was enrolled or attending VCU prior to withdrawal). Any unearned aid (for the period of enrollment that the student did not complete from the date of withdrawal to the end of the semester) must be returned to the appropriate Title IV programs from which the student was awarded.

For VCU students who withdraw prior to completing 60 percent of the semester, they will have to return or repay all or a portion of the aid funds that had been disbursed to their VCU account. As a result, students who withdraw prior to completing 60 percent of the semester may be responsible for all or a portion of their tuition/fee bill that was previously paid by financial aid sources.

Examples are available online (go to <http://www.vcu.edu/enroll/finaid/links> and click on "Financial aid implications if you withdraw from VCU").

### Graduate students in undergraduate courses

Students who are classified as graduate students will be eligible for federal financial aid only if they are enrolled at least half time in courses that can be applied toward their graduate degree. The Office of Financial Aid will identify all graduate students who have applied for financial aid but have registered for less than half-time graduate course work in any given semester. If the undergraduate course work for which the student has registered is considered preparatory to the graduate degree, documentation must be provided by the student's adviser or program representative to verify which undergraduate courses are required. In these cases, the student will be eligible for federal financial aid, but it will be based on the fifth-year undergraduate loan limits. Students who have been admitted to a dual degree program can take any amount of required undergraduate coursework and will still be eligible for graduate loan limits.

### Satisfactory Academic Progress for financial aid purposes

To be eligible to receive financial aid at VCU, students must make Satisfactory Academic Progress. SAP is a combination of qualitative and quantitative components. SAP is measured by:

- **GPA.** Generally, graduate students are expected to maintain at least a 3.0 GPA as specified by their departments.
- **Completion rate.** The completion rate is measured by the number of credit hours earned divided by the number of credit hours attempted. All students must successfully complete at least 67 percent of all credit hours attempted (withdrawals, incompletes and repeated courses also are considered attempted credit hours).

The Office of Financial Aid will perform a periodic SAP review for students who receive or apply for financial aid. The reviews are typically performed at the end of the spring semester and must be completed at least once per academic year. Students will be alerted with warning letters, whenever possible, to provide them with notice that their financial aid may be in danger of being suspended. When students fail to meet SAP requirements, they will receive suspension letters indicating that they are ineligible to receive further financial aid. Students whose eligibility for financial aid has been suspended may submit an appeal if mitigating circumstances prevented the student from maintaining SAP.

For more detailed information about the VCU Satisfactory Academic Progress policy, visit the Office of Financial Aid Web site (<http://www.vcu.edu/enroll/finaid>).

### Types of financial aid

There are three basic types of financial aid: loans, grants and work-study. Each type has different features and advantages.

### Loans

In terms of total dollars available, long-term federal loan programs provide the most dollars. Federal loans must be repaid after the grace period and/or deferment periods have expired. Students must generally remain enrolled at least half time (five credit hours for graduate students). Multiple repayment plans may be available for most federal loans. Selected loan programs include:

- Federal Direct Loan (subsidized and unsubsidized)
- Health Professions Student Loan
- Loan for Disadvantaged Students
- Nursing Student Loan

## Grants

Contact individual academic departments for information about grant or scholarship programs.

## Work-study

Work-study is a form of financial aid that pays wages for work performed through employment. Work-study positions are located on-campus and in approved off-campus locations. Hourly wages will vary depending on skills and experience. Job listings are posted online at <http://www.students.vcu.edu/careers>. When interviewing for work-study positions, students should take copies of their Financial Aid Award Notifications to show prospective employers. Graduate students usually work 15 to 25 hours per week.

## Graduate assistantships and fellowships

University graduate teaching and research assistantships and fellowships are awarded to continuing and newly admitted graduate students. Eligibility is based on a variety of criteria. Special rules, contained in the VCU Graduate School Policies and Procedures Statement on Graduate Fellowships and Assistantships, apply to graduate assistants. Such awards must be coordinated with any other financial aid. Any stipend support is reported to the Internal Revenue Service and is subject to IRS rules. Refer to the Graduate School Web site ([www.vcu.edu/graduate/es/financing.html](http://www.vcu.edu/graduate/es/financing.html)) for a copy of the policy statement. A university graduate assistant is precluded from any other type of employment and forgoes the normal student academic vacations for the period of the appointment. Graduate program directors and prospective graduate assistants should agree upon the specific conditions of employment before finalizing appointments.

Inquiry about such awards should be made directly to the school or department in which the student intends to enroll. Students in the process of applying for admission should indicate their interest in such support. Some programs include a separate application for support with the application for admission. Refer to the individual chapters in this bulletin, program Web sites, and the Graduate School Web site ([www.vcu.edu/graduate/es/financing.html](http://www.vcu.edu/graduate/es/financing.html)) for additional information on graduate student support and funding opportunities.

## Veteran and reservist educational benefits

Available veteran and reservist educational assistance programs include:

- Montgomery GI Bill – Active Duty (Chapter 30)
- Vocational Rehabilitation (Voc Rehab, Chapter 31)
- Veterans Education Assistance Program (VEAP, Chapter 32)
- Survivors' and Dependents Educational Assistance Program (DEA, Chapter 35)
- Montgomery GI Bill – Selected Reserves (Chapter 1606)
- Tutorial Assistance Program
- VA Work-Study Program
- Virginia War Orphans Education Program (WOE)
- Diplomatic Security and Antiterrorism Assistance

Detailed information about eligibility for these programs is available on the

Web (<http://www.vcu.edu/enroll/finaid>). To obtain printed material, contact:

Veterans Affairs Office  
Office of Financial Aid  
901 W. Franklin St., Room 113  
Richmond, VA 23284-3026  
(804) 828-6166  
Fax (804) 827-0060  
E-mail: [jmchambe@vcu.edu](mailto:jmchambe@vcu.edu) or [faidmail@vcu.edu](mailto:faidmail@vcu.edu)

Eligible veterans must comply with the following requirements to receive educational benefits as students.

1. The veteran must apply or be accepted into a degree- or certificate-seeking program.
2. The veteran must request certification after registering for courses each semester and each summer session from the Veterans Affairs Office.
3. The veteran may be eligible to use benefits for only those courses applied toward a degree or certificate program.
4. The veteran is not eligible to use benefits for courses taken on an audit basis. If repeating a course or taking a course with no credits, the veteran must notify the Veterans Affairs Office.
5. The veteran is responsible for ensuring that transcripts are evaluated for transfer credits to be accepted by VCU. The veteran must submit this information to the Veterans Affairs Office for transmittal to the Veteran's Administration Regional Office.
6. The veteran must notify the Veterans Affairs Office if planning to drop or withdraw from classes or stop attending VCU.

## Virginia War Orphans Education Program

The Virginia War Orphans Education Program provides educational assistance for children of certain veterans or service personnel. Applications are available at the VCU Veterans Affairs Office. Students should begin the application process at least four months before beginning studies at VCU.

Eligibility for this assistance is contingent upon the following:

1. the applicant must be no less than 16 and no more than 25 years old,
2. one of the applicant's parents must have served in the U.S. Armed Forces and must be permanently or totally disabled due to war or other armed conflict, or
3. one of the applicant's parents died as a result of war or other armed conflict, or
4. one of the applicant's parents is listed as a prisoner of war or missing in action, or
5. the applicant's parent, on which eligibility is based, has been a resident of Virginia at the time of entry into active military duty, or
6. the applicant's parent, on which eligibility is based, has been a resident of Virginia for at least 10 consecutive years immediately before date of application, or
7. the surviving parent has been a resident of Virginia for at least 10 years prior to marrying the deceased parent, or must have been a resident of Virginia for at least 10 consecutive years immediately prior

to the date on which the application was submitted by or on behalf of such child for admission to any educational or training institution in Virginia.

Those eligible for the Virginia War Orphans Education Program are entitled to a tuition-free education at state-supported educational or training institutions on an annual basis. (Summer school also may be included in the annual certification of students.) Eligible students can use this benefit to pursue any vocational, technical, undergraduate or graduate program of instruction. Generally, programs listed in the academic catalogues of state-supported institutions are acceptable provided they have a clearly defined educational objective, i.e., certificate, diploma or degree.

### Preparing Future Faculty Program

The Graduate School at VCU is committed to providing graduate students with ongoing opportunities for academic and professional development. Working with graduate faculty and academic graduate program directors, and with academic and administrative support from across the university, the Graduate School strives to identify, support and sponsor initiatives that will prepare the next generation of the professoriate.

In conjunction with the Center for Teaching Excellence, the Graduate School sponsors the Preparing Future Faculty Program for graduate students interested in pursuing careers in higher education. Complete information about the program is available on the Graduate School Web site at [www.vcu.edu/graduate/gp/initiatives.html#preparingfuturefaculty](http://www.vcu.edu/graduate/gp/initiatives.html#preparingfuturefaculty).

### Graduate School Mentorship Program

The Graduate School Mentorship Program matches undergraduate and graduate students in mentoring relationships. The goals of the program are twofold: first, to expose undergraduate students to the graduate experience as they consider options and make decisions about post-baccalaureate study and as they transition from undergraduate to graduate student status, and secondly, to provide graduate students with the opportunity to develop mentoring skills as they share their own personal experiences with the undergraduate participants in the program.

Complete information about the program is available on the Graduate School Web site at [www.vcu.edu/graduate/es/mentoring.html](http://www.vcu.edu/graduate/es/mentoring.html).

### Off-campus graduate instruction

VCU is dedicated to serving the needs of Virginians by providing off-campus graduate credit instruction when and where it is needed. Courses are offered in response to an expression of need from various locales and groups.

Off-campus instruction features the same course work available on campus, and most off-campus courses are fully degree-applicable within the admission standards of the Graduate School. Tuition for most off-campus classes is the same as other university classes; however, students in off-campus credit classes are not charged university or activity fees.

For additional information on off-campus credit instruction, contact Edward Howard, coordinator of Off-campus Programs, Office of Community Programs, 920 W. Franklin St., Richmond, VA 23284-3062, telephone (804) 828-8819, or visit the Office of Community Programs Web site at [www.vcu.edu/ocp](http://www.vcu.edu/ocp).

## Interdisciplinary Studies, Master of (M.I.S.)

### Admission requirements summary

#### Interdisciplinary Studies, Master of (M.I.S.)

Indicate specialization

The Master of Interdisciplinary Studies (M.I.S.) degree program provides an opportunity for the highly motivated student to pursue a unique course of study that combines graduate course work in a learner-centered approach to graduate education. The student is an active participant in proposing a curriculum that supports an individualized and scholastically rigorous academic goal in a clearly defined, multidisciplinary program. To expand the program's range of options and interdisciplinary perspectives, the program allows for cooperative ventures with other approved colleges and universities.

### M.I.S. programs of study

Opportunities for interdisciplinary study in the M.I.S. degree program currently include the following options. **Please read all general M.I.S. information before preceding to the individual program links provided in the menu to the right.**

- [Individual programs of study](#) (developed with director of the M.I.S. program)
- [Interdisciplinary Arts/Off-campus program with a focus in studio art](#)
- [Mathematics and Science Leadership/K-8 Mathematics Specialist track](#)

### Application for admission to all M.I.S. programs of study

Applicants to all M.I.S. programs of study must complete the VCU Graduate School Application to Graduate Study ([www.vcu.edu/graduate/ps/apply\\_options.html](http://www.vcu.edu/graduate/ps/apply_options.html)). Completed applications and all supporting documentation must be submitted to the VCU Graduate School according to the instructions provided on the [Graduate School Web site](#).

Students should refer to the Admissions Requirements Summary charts at the beginning of this section for a summary of current contact information, semesters of entry, application deadlines, testing requirements, and special or supplementary requirements for each M.I.S. program of study.

### Admission criteria for all M.I.S. programs of study

General admission requirements to the Graduate School and all M.I.S. programs of study include:

- graduation from an accredited college or university or its equivalent.
- a 2.8 cumulative GPA for at least the last two years (or last 60 hours) of undergraduate work.
- satisfactory scores from a current (fewer than five years old) standardized test commonly used and deemed appropriate by the relevant discipline.
- three letters of recommendation.
- applicant's written statement of intent for pursuing graduate studies.
- completion of a proposed curriculum plan outlining the applicant's specific course of study. When finalized, this plan is the official statement of the student's program requirements for completion of the M.I.S. degree.



## General M.I.S. program requirements for all M.I.S. programs of study

The initial curriculum plan proposed at the time of application must be finalized with the program director or track coordinator by the end of the first semester of study. Any subsequent changes in the curriculum plan must be made with the program director or track coordinator's approval.

In addition to any admission or individual course prerequisites, students enrolled in M.I.S. programs of study must complete a minimum of 39 graduate semester credits, including:

- at least nine, and not more than 15, graduate semester credits in each of at least two disciplines. No more than 15 credits in any one discipline (exclusive of directed research, independent study, special project or thesis requirements) may be applied toward the degree.
- a minimum of three credits in a research methods course relevant to the final research project.
- three to six graduate credits of approved directed research, independent study, special project or thesis work. Formal approval for the final research project must be obtained from the director or track coordinator before the student begins the final project.
- up to six semester hours of graduate course work (nine from Virginia State University) for transfer from other accredited institutions with the approval of director or track coordinator. (See Mathematics and Science Leadership/K-8 Mathematics Specialist track section for information regarding transfer course work.)
- at least 50 percent of the course work taken at the 600 level or higher.
- elective course work approved by the program director or track coordinator as part of the official curriculum plan.
- **a maximum of six hours taken as a nondegree-seeking student before admission to the program.**

## Graduation requirements for all M.I.S. programs of study

Candidates for degrees are eligible for graduation upon completion of all academic requirements in effect at the time of the first registration in the program, provided they are continuously enrolled and provided the requirements are met within the time limit specified by the Graduate School. Students failing to satisfy the time requirement and who are readmitted to a program shall satisfy requirements in effect at the time of reacceptance into the program.

All graduate students are subject to the admission and academic standards that govern graduate study at VCU as determined by the University Graduate Council and as articulated in the [Graduate Studies at VCU](#) section of this bulletin. A checklist summarizing academic policies and requirements for graduation is provided under the General Academic Regulations heading of the Graduate Studies at VCU section. Additional instructions and guidelines for applying to graduate, is available on the VCU Graduate School Web site [www.vcu.edu/graduate/es/graduation.html](http://www.vcu.edu/graduate/es/graduation.html).

## Additional track-specific admission requirements

In addition to the Graduate School's general requirements for admission

and academic standing, and general M.I.S. admission criteria and program requirements, applicants to M.I.S. programs must complete any track-specific requirements as indicated on the following Web sites:

- [Individual programs of study](#) (developed with director of the M.I.S. program)
- [Interdisciplinary Arts/Off-campus program with a focus in studio art](#)
- [Mathematics and Science Leadership/K-8 Mathematics Specialist track](#)

## Program administration

### Graduate School

1001 Grove Ave.  
P.O. Box 843051  
Richmond, VA 23284-3051  
(804) 828-6916  
Fax (804) 828-6949  
[www.vcu.edu/graduate/ps/master\\_inter.html](http://www.vcu.edu/graduate/ps/master_inter.html)

### Sherry T. Sandkam

Associate Dean, Graduate School  
Assistant Professor, Department of Educational Leadership, School of Education  
Director, Master of Interdisciplinary Studies Program  
[ssandkam@vcu.edu](mailto:ssandkam@vcu.edu)

### Office of Community Programs

Division of Academic Affairs  
920 W. Franklin St., Room 202  
P.O. Box 843062  
Richmond, VA 23284-3062  
(804) 828-6931  
Fax (804) 828-2756  
[www.vcu.edu/ocp/programs/gradart/mis\\_art.html](http://www.vcu.edu/ocp/programs/gradart/mis_art.html)

### Sue F. Munro

Program Director, M.I.S., Interdisciplinary Arts  
[sfmunro@vcu.edu](mailto:sfmunro@vcu.edu)

### Department of Mathematics and Applied Mathematics

1001 W. Main St.  
P.O. Box 842014  
Richmond, VA 23284-2014  
(804) 828-1301, ext. 121  
Fax (804) 828-7797  
[www.math.vcu.edu](http://www.math.vcu.edu)

### Reuben W. Farley

Director, Interdisciplinary Programs in Mathematics and Science  
Professor, Department of Mathematics and Applied Mathematics, College of Humanities and Sciences  
[rwfarley@vcu.edu](mailto:rwfarley@vcu.edu)

## Individual Master of Interdisciplinary Studies programs

## Admission requirements summary

### Individual Master of Interdisciplinary Studies programs

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.I.S.	Fall Spring Summer	May 1 Oct 1 Mar 1	GRE

#### Special requirements:

See the [M.I.S. Web site](#) for essay instructions and curriculum planning form to be submitted with application

The Master of Interdisciplinary Studies degree program provides an opportunity for the highly motivated student to develop an individualized program of study that combines graduate course work in two or more selected disciplines. This opportunity is available for graduate students who wish to pursue a clearly defined, multidisciplinary program that does not duplicate an existing professional curriculum or specialization in a traditional program.

## Admission requirements

In addition to the general VCU Graduate School requirements and the general requirements for admission to the M.I.S. program, applicants who are proposing an individualized course of study must:

- submit satisfactory scores on the GRE from a current test (fewer than five years old). Substitutions of other standardized test scores may be made on a case-by-case basis, depending upon the focus areas identified in the curriculum proposal and the approval of all members of the admission committee.
- articulate in the written statement of intent the applicant's academic goal and how the M.I.S. degree program will facilitate the achievement of that goal. In some cases, applicants may want to address how a more traditional program does not meet their specific academic goals.
- complete a preliminary curriculum proposal form identifying the specific course work that will support the academic goal articulated in the written statement of intent. This form is available on the Master of Interdisciplinary Studies Web site at [www.vcu.edu/graduate/ps/master\\_inter.html](http://www.vcu.edu/graduate/ps/master_inter.html).

Students who are interested in working toward a degree are encouraged to apply to the program as early as possible, since a **maximum of six credit hours taken as a nondegree-seeking student may be counted toward the degree.**

Members of the admission committee include the directors of graduate study of the two focus areas identified in the curriculum proposal and the director of the M.I.S. program. To facilitate the application process, M.I.S. applicants who are proposing individualized programs of study are strongly encouraged to schedule preliminary advising interviews with the director of the M.I.S. program to discuss their academic goals and curricular proposals.

## Program requirements

In addition to the general M.I.S. degree requirements, students who are admitted to individual M.I.S. programs of study must:

- obtain approval for all transfer and elective course work as part of the formal advising process for developing and/or changing the approved curriculum plan

- complete a minimum of three graduate credits in a research methods course relevant to the final research project before beginning the final research project; and
- complete three to six graduate credits as part of the final research project in the form of an approved directed research, independent study, special project or thesis. A student who chooses the thesis option must identify a thesis adviser and committee before beginning formal work on the thesis. The student will follow the thesis guidelines of the school/program of the thesis adviser, as well as the general guidelines for completion of theses/dissertations as prescribed by the Graduate School, the University Graduate Council and VCU Libraries [www.vcu.edu/graduate/es/thesis.html](http://www.vcu.edu/graduate/es/thesis.html). A student who chooses the directed research option must obtain formal approval for the final research project. Before beginning formal work on the thesis or the final directed research project, the student must submit to the director of the M.I.S. program a copy of the proposed project, along with a signed copy of the Final Project Proposal Approval form (available on the M.I.S. Web site at [www.vcu.edu/graduate/ps/master\\_individual.html](http://www.vcu.edu/graduate/ps/master_individual.html)).

## Interdisciplinary Arts/Off-campus program

### Admission requirements summary

#### Interdisciplinary Arts/Off-campus program

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.I.S.	Fall Spring Summer	Jul 1 Dec 1 May 2	

#### Special requirements:

Minimum of 10 slides demonstrating expertise in at least one discipline, preferably more

See [Web site](#) for detailed discussion of program

The School of the Arts and the Office of Community Programs jointly administer the M.I.S. Interdisciplinary Arts/Off-campus program with a focus in studio art. This program provides an opportunity for the off-campus student to earn a graduate degree by combining art courses, both studio and academic, within established guidelines. The program is not the equivalent of a Master of Fine Arts degree; it does, however, provide an additional option for qualified persons, especially art teachers, who are interested in studio art classes. Focus areas include, but are not limited to, crafts, computers and the arts, painting, photography, printmaking, drawing, and sculpture.

Off-campus graduate art classes are offered at a variety of sites from Fairfax County, Va., to Virginia Beach — in the late afternoon during the regular school year and in all-day workshops during the summer. Both studio art and art education courses are offered. Open to all qualified students, these courses may be used for personal enrichment, license renewal or as part of a degree program. Most of the participants in the off-campus art classes are public school teachers. An exciting aspect of the program is that their students begin to benefit immediately as the teachers transfer renewed skills, knowledge and creative excitement to their own classrooms.

## Admission requirements

An admissions committee in the School of the Arts will review applications to the M.I.S. Interdisciplinary Arts program of study. The committee will look for demonstrated strength in at least one discipline. In addition to

general VCU Graduate School requirements for admission and the general requirements for admission to the M.I.S. program, applicants to the M.I.S. Interdisciplinary Arts program must:

- have taken a minimum of 36 undergraduate and/or graduate studio credits;
- in lieu of a standardized test, prepare a minimum of 10 slides, demonstrating excellence in at least one discipline, but preferably in more than one; and
- articulate in the written letter of intent interest in working in at least two disciplines in order to explore interdisciplinary potential in the arts.

Many students prefer to take a course before deciding to apply to the M.I.S. degree program. **Students who are interested in working toward a degree are encouraged to apply to the program as early as possible, however, since a maximum of six credit hours taken as a nondegree-seeking student may be counted toward the degree.**

## Program requirements

In addition to the general M.I.S. degree requirements, the Interdisciplinary Arts track requires the completion of 39 graduate semester credit hours as follows:

- at least nine and no more than 15 semester hours in each of two focus areas
- from three to 15 semester hours of art electives, either studio or art education, outside the two chosen focus areas
- six semester hours of an approved final project, resulting in a graduate exhibition and written documentation

Students should refer to the M.I.S. Interdisciplinary Arts Web site for a detailed description of program requirements, including focus areas and elective options, final project information, continuous enrollment requirements, and the Master of Interdisciplinary Studies in Interdisciplinary Arts guidelines booklet

[www.vcu.edu/ocp/programs/gradart/mis\\_art.html](http://www.vcu.edu/ocp/programs/gradart/mis_art.html).

## Interdisciplinary Mathematics and Science Leadership/K-8 Mathematics Specialist track

### Admission requirements summary

#### Interdisciplinary Mathematics and Science Leadership/K-8 Mathematics Specialist track

Degree:	Semester(s) of entry:	Deadline dates:	Test requirements:
M.I.S.	Fall Spring Summer		GRE or MAT

#### Special requirements:

At least three years of successful K-8 mathematics and/or science teaching experience

Three recommendations: at least one from an immediate supervisor or principal and at least one that addresses leadership potential

Interview to develop program of study – program director will contact after initial review of application

See [Web site](#) for detailed discussion of program

The Mathematics and Science Leadership/K-8 mathematics specialist track in the Master of Interdisciplinary Studies program is designed for in-service teachers of mathematics for kindergarten through eighth grades. In designing their individual programs, students, in conjunction with their advisers, may select courses offered by VCU mathematics, science and education departments and courses offered by other collaborating Virginia colleges and universities. The Graduate School, the College of Humanities and Sciences, the School of Education and the departments of Mathematics and Applied Mathematics and Teacher Education administer the program.

## Admission requirements

In addition to the general VCU Graduate School requirements for admission and the overall requirements for admission to the M.I.S. program, applicants to the Mathematics and Science Leadership/K-8 mathematics specialist track must:

- submit satisfactory scores on either the GRE or MAT from a current test (fewer than five years old). Provisional admission may be granted pending fulfillment of this requirement.
- provide three letters of recommendation, at least one of which must be submitted from an immediate supervisor or principal and at least one of which must address the applicant's potential for leadership.
- provide evidence in the written statement of intent of at least three years of experience in teaching mathematics and/or science for kindergarten through eighth grades.

Upon review of the application and all supporting documentation, the Mathematics/Science Leadership program coordinator will contact applicants to schedule interviews to develop programs of study that will detail specific courses to be taken and the institutions offering those courses.

## Program description

Candidates must complete all of the general program requirements of the M.I.S. program. In addition:

- both of the discipline focus areas are required to be in mathematics, one of the sciences or mathematics/science education.
- in designing their individual programs, students in the mathematics specialist track typically include the following courses: MATH 661, 662, 663, 664 and 665.
- at least 18 of the 39 credits, including the final project, must be granted by VCU. Up to six transfer credits may be approved, and the remainder of the credits must be from consortium partners as approved by the students' advisers, the VCU Graduate School, and the Mathematics and Science Leadership Advisory Committee.
- the final project must be supervised by a VCU graduate faculty member, may be in mathematics, science or education, and must include an indication of the relationship of the subject of the project to teaching at the kindergarten-through-eighth-grade level.



# Professional studies

Virginia Commonwealth University currently offers first professional degree programs leading to the Doctor of Dental Surgery, Doctor of Medicine, Doctor of Pharmacy and Doctor of Physical Therapy degrees.

### Professional programs admissions

For information about admission to MCV Campus professional programs, refer to professional sections of the schools of Allied Health Professions, Dentistry, Medicine and Pharmacy.

### General admission requirements and procedures

The Board of Visitors, the administration and the faculty of VCU are committed to a policy of equal opportunity in education and employment without regard to age, race, color, national origin, gender, religion, sexual orientation, veteran's status, political affiliation or disability.

### Admission requirements

Admission requirements, entrance examinations and application materials for first professional programs may be obtained by contacting the appropriate admissions office. Other detailed information including financial aid opportunities, procedures for international students, regulations and procedures, academic, curricula, and degree requirements are included in the section describing each professional program.

### Admission through the University Honors Program

VCU undergraduate students participating in the University Honors Program may apply for guaranteed admission to certain professional programs before matriculation at VCU or early in their undergraduate studies. (The specific deadline for applying is set by each program.) Honors students who receive guaranteed admission may enter the programs of their choice provided they fulfill the requirements for graduation with University Honors and satisfy the curricular prerequisites of the program they plan to enter. In some programs, the requirement for standardized testing is waived.

To be granted guaranteed admission to any professional program, a student must submit a completed application form with three letters of recommendation to the appropriate admissions office as indicated previously. To be accepted into a Guaranteed Admission Program, a student must be accepted by the university, by the University Honors Program and by the admissions committee of the program the student wishes to enter. The admissions committee may require an interview. Final notification of guaranteed admission is made by the appropriate school's admissions office. For additional information, refer to the [Undergraduate Bulletin](#).

The following professional programs offer guaranteed admission through the University Honors Program:

Doctor of Dental Surgery  
Doctor of Medicine  
Doctor of Occupational Therapy  
Doctor of Pharmacy  
Doctor of Physical Therapy

### International students

International students should refer to the appropriate professional

program's chapter for information regarding international student admission guidelines.

### Professional programs financial aid

Current information on financial aid programs, policies and procedures are available on the VCU Web site at <http://www.vcu.edu/enroll/finaid>.

To obtain printed materials or additional information, call or visit the appropriate financial aid office.

#### Schools of Allied Health Professions, Nursing and Pharmacy

Sanger Hall, Room 1-055  
1101 E. Marshall St.  
P.O. Box 980244  
Richmond, VA 23298-0244  
(804) 828-9800  
Fax (804) 828-2703  
E-mail: [bhfore@vcu.edu](mailto:bhfore@vcu.edu)

#### School of Dentistry

Lyons Building, Room 309  
520 N. 12th St.  
P.O. Box 980566  
Richmond, VA 23298-0566  
(804) 828-6374  
Fax (804) 828-5288  
E-mail: [kdgillia@vcu.edu](mailto:kdgillia@vcu.edu)

#### School of Medicine

Sanger Hall, Room 1-008  
1101 E. Marshall St.  
P.O. Box 980565  
Richmond, VA 23298-0565  
(804) 828-4006  
Fax (804) 827-5555  
E-mail: [mcvfinaid@vcu.edu](mailto:mcvfinaid@vcu.edu)

### eServices – online records access

Students are encouraged to use the eServices Web site, a password-protected service for viewing VCU student records online, to check the status of their financial aid application and award package. Students also may register for classes, print bills and more. The eServices Web site is located at <https://iserver.adm.vcu.edu/students>.

### E-mail – official method of communication

Students are required to obtain an official VCU student e-mail account within one week of the beginning of their first semester of enrollment. Students are responsible for reading in a timely fashion university-related communications sent to their official VCU student e-mail account. The Office of Financial Aid uses e-mail to provide financial aid information, to request documentation to support financial aid application data, and to provide financial aid application status and award information. Information on how to set up an account is available online (go to the "Academic" section of "Computer Accounts" at [http://www.vcu.edu/it/computer\\_accounts.html](http://www.vcu.edu/it/computer_accounts.html)).

### Identification requirements

Students must provide picture identification, preferably a VCUCard, for in-person access to financial aid records. For the student's protection, information provided over the telephone and e-mail may be limited if the financial aid staff member is not confident of the student's identity.

### Eligibility for financial aid

Most students are eligible for some type of financial aid regardless of family financial circumstances. Basically, to receive aid from any of the federal or state student aid programs, students must:

- submit a Free Application for Federal Student Aid (FAFSA) or Renewal FAFSA designating VCU (school code 003735) to receive FAFSA results.
- demonstrate financial need, except for some loan programs.
- have a high school diploma or a General Education Development (GED) Certificate.
- be enrolled or accepted for enrollment to an eligible degree or certificate program.
- be enrolled at least half time (five or more graduate credit hours).
- be a U.S. citizen or eligible noncitizen.
- have a valid Social Security number (unless from the Republic of the Marshall Islands, the Federated States of Micronesia or the Republic of Palau).
- meet Reasonable Academic Progress (RAP) standards as defined by the VCU Office of Financial Aid (the full VCU RAP policy is available online at <http://www.vcu.edu/enroll/finaid/progress>).
- certify that federal and state financial aid will be used for educational purposes only.
- not be in default on a federal student loan and not owe money on a federal student grant.
- comply with the Selective Service registration, if required.
- not be convicted under federal or state law of sale or possession of illegal drugs.

Detailed information can be found in the federal Student Guide, available in print form from the VCU Office of Financial Aid or electronically at [http://studentaid.ed.gov/students/publications/student\\_guide/index.html](http://studentaid.ed.gov/students/publications/student_guide/index.html).

### Applying for financial aid

The financial aid application process for the academic year begins Jan. 1. All students are encouraged to complete and submit the FAFSA as soon as possible after Jan. 1, designating VCU (school code 003735) to receive the results. In order to reduce problems, errors and omissions on the FAFSA, students are encouraged to apply electronically using FAFSA on the Web (available online at <http://www.fafsa.ed.gov/>). Once the FAFSA is filed, the federal processor will send the student a Student Aid Report (SAR) or electronic SAR Acknowledgement, and also will electronically send the information to the VCU Office of Financial Aid, if VCU was listed as a school to receive the data. If additional information is needed to complete processing of the application, the VCU Office of Financial Aid will send the student a request for additional information. Responding promptly to such requests will ensure timely processing of the application. Once the review of FAFSA data has been completed, the Office of Financial Aid will send the student a Financial Aid Notification.

Please note that health profession students (dentistry, medicine, nursing or pharmacy) must provide both student and parental information on the FAFSA to apply and receive consideration for Title VII grants and loans from the Department of Health and Human Services.

### Priority filing dates

The VCU Office of Financial Aid recommends electronically filing the FAFSA by March 1\*. Students should complete the FAFSA using data from their completed tax returns. If necessary, they may use estimated tax return data in order to meet the VCU priority filing date but should be prepared to submit a copy of their completed tax returns and W2 forms to VCU as soon as possible. Students will receive their Financial Aid Notification after their FAFSA application data has been verified. If students have not applied for financial aid in a timely manner, they may want to participate in the VCU Installment Payment Plan, which budgets each semester's bill over four payments. Information about this plan can be found on the Student Accounting Department's Web site (<http://www.vcu.edu/enroll/sa/payment/ipp.html>).

\* Students who do not have access to the Web may apply using the paper FAFSA, available through VCU, high schools, colleges and most public libraries. Those students completing a paper application should mail it to the federal processor by Feb. 1.

### Summer studies

Limited financial aid may be available during the summer semester. Students applying for the summer semester must file the FAFSA for the academic year preceeding the summer semester. Students interested in financial aid for the summer semester should obtain a VCU Summer Studies Schedule of Classes (available in March) for more details.

### Study abroad

Financial assistance is available to eligible students enrolled in approved study abroad programs. All study abroad programs must be coordinated through the Office of International Education at (804) 828-8471. Students should work with a financial aid counselor to coordinate aid for their study abroad program. Information about financial aid and study abroad is available online at [http://www.vcu.edu/oie/eao/admin\\_matters/ea\\_financial\\_aid.html](http://www.vcu.edu/oie/eao/admin_matters/ea_financial_aid.html).

### Quality assurance

To ensure that information provided on the FAFSA is accurate, a student's application may be selected for review at any time during an enrollment period, and the student will be requested to provide documentation that supports the information. By signing the FAFSA, the student (and the student's parents or spouse, if applicable) agreed to furnish such documentation. If the documentation is not provided when requested, financial aid awards will be canceled and any funds already disbursed may need to be repaid.

### University bill

The Student Accounting Department sends bills for tuition, fees and other university charges to students whose financial aid will not cover their university charges. When financial aid awards (grants, scholarships and loans) are not enough to pay university charges, the remaining balance must be paid from personal funds, credit card or the VCU Installment Payment Plan. Federal Work-Study awards will not be deducted from university charges because those funds are paid directly to the student, based on hours worked. Any outstanding balance owed will hold a student from registration for courses.

### Financial aid appeals

Financial aid eligibility decisions are made using federal, state and institutional regulations and policies. Students may appeal their calculated contribution if special circumstances warrant a review. Reasons for an appeal might include one of the following documented unusual

circumstances:

- loss or reduction of employment earnings
- disability or death of parent or spouse
- separation or divorce
- loss or reduction of untaxed income
- losses due to a natural disaster
- unusually high educational program costs
- unusual medical expenses
- dependent and child care expenses

Any financial aid staff member can advise a student about the procedures on how to file an appeal.

### Federal financial aid refund policy

Students who receive federal Title IV grant or loan assistance and withdraw from VCU before completing 60 percent of the semester (as measured in calendar days) must have their eligibility recalculated based on the federal Return of Title IV Funds formula. This federal formula specifies that a student's financial aid eligibility must be recalculated based on the aid the student has "earned" (based on the number of days that the student was enrolled or attending VCU prior to withdrawal). Any unearned aid (for the period of enrollment that the student did not complete from the date of withdrawal to the end of the semester) must be returned to the appropriate Title IV programs from which the student was awarded.

For VCU students who withdraw prior to completing 60 percent of the semester, they will have to return or repay all or a portion of the aid funds that had been disbursed to their VCU account. As a result, students who withdraw prior to completing 60 percent of the semester may be responsible for all or a portion of their tuition/fee bill that was previously paid by financial aid sources.

Examples are available online (go to <http://www.vcu.edu/enroll/finaid/links> and click on "Financial aid implications if you withdraw from VCU").

### Satisfactory Academic Progress

To be eligible to receive financial aid at VCU, students must make Satisfactory Academic Progress (SAP). SAP is a combination of qualitative and quantitative components and is measured by completion rate. The completion rate is the number of credit hours earned divided by the number of credit hours attempted. All students must successfully complete at least 67 percent of all credit hours attempted (withdrawals, incompletes and repeated courses also are considered attempted credit hours).

The Office of Financial Aid will perform a periodic SAP review for students who receive or apply for financial aid. The reviews are typically performed at the end of the spring semester and must be completed at least once per academic year.

Students will be alerted with warning letters, whenever possible, to provide them with notice that their financial aid may be in danger of being suspended. When students fail to meet SAP requirements, they will receive suspension letters indicating that they are ineligible to receive further financial aid. Students whose eligibility for financial aid has been suspended may submit an appeal if mitigating circumstances prevented the student from maintaining SAP.

For more detailed information about the VCU Satisfactory Academic Progress policy, visit the Office of Financial Aid Web site

(<http://www.vcu.edu/enroll/finaid/progress>).

### Types of financial aid

There are three basic types of financial aid: loans, grants and work-study. Each type has different features and advantages.

#### Loans

In terms of total dollars available, long-term federal loan programs provide the most dollars. Federal loans must be repaid after the grace period and/or deferment periods have expired. Students must generally remain enrolled at least half-time (five credit hours for graduate students). Multiple repayment plans may be available for most federal loans. Selected loan programs include:

- Federal Direct Loan (subsidized and unsubsidized)
- Health Professions Student Loan
- Loan for Disadvantaged Students
- Nursing Student Loan
- Primary Care Loan

#### Grants

Contact individual academic departments for information about grant or scholarship programs.

#### Work-study

Work-study is a form of financial aid that pays wages for work performed through employment. Work-study positions are located on campus and in approved off-campus locations. Hourly wages will vary depending on skills and experience. Job listings are posted to the Career Center's Web site (<http://www.students.vcu.edu/careers>). When interviewing for work-study positions, students should take copies of their Financial Aid Notifications to show prospective employers.

#### Veteran and reservist educational benefits

Available veteran and reservist educational assistance programs include:

- Montgomery GI Bill – Active Duty (Chapter 30)
- Vocational Rehabilitation (Voc Rehab, Chapter 31)
- Veterans Education Assistance Program (VEAP, Chapter 32)
- Survivors' and Dependents Educational Assistance Program (DEA, Chapter 35)
- Montgomery GI Bill – Selected Reserves (Chapter 1606)
- Tutorial Assistance Program
- VA Work-Study Program
- Virginia War Orphans Education Program (WOE)
- Diplomatic Security and Antiterrorism Assistance

Detailed information about eligibility for these programs is available on the

Web ([http://www.vcu.edu/enroll/vets\\_benefits](http://www.vcu.edu/enroll/vets_benefits)). To obtain printed material, contact:

Veterans Affairs Office  
Office of Records and Registration  
Virginia Commonwealth University  
827 W. Franklin St., Room 326  
Richmond, VA 23284-2520  
(804) 828-6166  
Fax (804) 827-8121  
E-mail: [jmchambl@vcu.edu](mailto:jmchambl@vcu.edu)

Eligible veterans must comply with the following requirements to receive educational benefits as students:

1. The veteran must apply or be accepted into a degree- or certificate-seeking program.
2. The veteran must request certification after registering for courses each semester and each summer session from the Veterans Affairs Office.
3. The veteran may be eligible to use benefits for only those courses applied toward a degree or certificate program.
4. The veteran is not eligible to use benefits for courses taken on an audit basis. If repeating a course or taking a course with no credits, the veteran must notify the Veterans Affairs Office.
5. The veteran is responsible for ensuring that transcripts are evaluated for transfer credits to be accepted by VCU. The veteran must submit this information to the Veterans Affairs Office for transmittal to the Veteran's Administration Regional Office.
6. The veteran must notify the Veterans Affairs Office if planning to drop or withdraw from classes or stop attending VCU.

### Virginia War Orphans Education Program

The Virginia War Orphans Education Program provides educational assistance for children of certain veterans or service personnel. Applications are available at the VCU Veterans Affairs Office. Students should begin the application process at least four months before beginning studies at VCU.

Eligibility for this assistance is contingent upon the following:

1. the applicant must be no less than 16 and no more than 25 years old,
2. one of the applicant's parents must have served in the U.S. Armed Forces and must be permanently or totally disabled due to war or other armed conflict, or
3. one of the applicant's parents died as a result of war or other armed conflict, or
4. one of the applicant's parents is listed as a prisoner of war or missing in action, or
5. the applicant's parent, on which eligibility is based, has been a resident of Virginia at the time of entry into active military duty, or
6. the applicant's parent, on which eligibility is based, has been a resident of Virginia for at least 10 consecutive years immediately before date of application, or
7. the surviving parent has been a resident of Virginia for at least 10

years prior to marrying the deceased parent, or must have been a resident of Virginia for at least 10 consecutive years immediately prior to the date on which the application was submitted by or on behalf of such child for admission to any educational or training institution in Virginia.

Those eligible for the Virginia War Orphans Education Program are entitled to a tuition-free education at state-supported educational or training institutions on an annual basis. (Summer school also may be included in the annual certification of students.) Eligible students can use this benefit to pursue any vocational, technical, undergraduate or graduate program of instruction. Generally, programs listed in the academic catalogues of state-supported institutions are acceptable provided they have a clearly defined educational objective, i.e., certificate, diploma or degree.

### Professional programs tuition and student fees

Students must pay all applicable tuition, room, board and other fees when due, as described in this section. Students who fail to pay these charges on time may be assessed a late payment fee. The university reserves the right to revise or alter all tuition and fees, regulations pertaining to student fees, and collection procedures at any time. In addition to expenses billed by the university, students should make allowances for books, clothing, supplies, travel and other out-of-pocket costs when figuring their total yearly expenses at the university.

### Student financial responsibilities

Students who enroll:

- are responsible for full payment of tuition and fees generated from their registration.
- are responsible for full payment of all room, board and other applicable miscellaneous charges.
- are responsible for keeping a current permanent mailing address on file with the Office of Records and Registration. Failure to receive an invoice because of an incorrect address does not relieve responsibility for timely payments.
- are responsible for establishing an official VCU e-mail address and reading their e-mail on a regular basis, since e-mail will be used by faculty and university offices to deliver important communications.

Tuition and fees are categorized and described on the Student Accounting Web site at [www.vcu.edu/enroll/sa/tuition](http://www.vcu.edu/enroll/sa/tuition).

All charges are subject to change by decision of the Board of Visitors.

### Tuition and fee schedule

Tuition and fees are categorized and described on the student accounting Web site at [www.vcu.edu/enroll/sa/tuition](http://www.vcu.edu/enroll/sa/tuition). Questions regarding tuition and fees may be directed to the Student Accounting Department at (804) 828-2228, or by e-mailing [stuacctg@vcu.edu](mailto:stuacctg@vcu.edu). All charges are subject to change by decision of the Board of Visitors.

### University fee

This fee is used by the university to support student facilities, campus development, intercollegiate athletics and other programs. Full-time students pay a flat-rate university fee each semester. Part-time students pay this fee on a per-credit basis.

## Student activity fee

This fee is used to support social, cultural and other student activities on the Monroe Park Campus. These activities include concerts, plays, student organizations and publications. Full-time students on the Monroe Park Campus pay a flat-rate student activity fee, while part-time students on the same campus pay this fee on a per-credit basis. Students on the MCV Campus are not charged this fee.

## Student Government Association fee

This fee is used to support social, cultural and other student activities on the MCV Campus. The fee is charged to all full-time and part-time MCV Campus students. Monroe Park Campus students are not charged this fee.

## Student health fee

All full-time students on both campuses must pay the student health fee. Part-time students may participate in the University Student Health Services on an elective basis by paying the student health fee. The University Student Health Services offers unlimited office visits for the diagnosis and treatment of acute and chronic illnesses. The fee does not cover accidental injury and hospitalization. The fee is used to cover operating costs for the University Student Health Services.

## Technology fee

The technology fee is charged to all undergraduate, graduate and professional students in all programs. Full-time students pay a flat rate. Part-time students pay a per-credit-hour rate. The fee is used to provide for students' technological needs and to support university-wide technological initiatives.

## Off-campus fees

The university fee, the student activity fee, the student government association fee (except School of Social Work) and the student health fee are not charged to students taking off-campus classes.

## Capital Outlay Fee

This fee is charged to all full-time and part-time non-resident, on-campus students. The fee is mandated by the General Assembly to reimburse the State for debt service costs attributable to non-resident students related to the financing of buildings and equipment.

## Special fee charges

Because of specialized programs, various schools and departments may charge each student additional fees to cover special materials, equipment breakage and other costs. For specific information about special fees, refer to the Student Accounting Department Web site or to the specific school or department section in this bulletin.

## Student billing

The Student Accounting Department issues bills to students showing charges for the following fees: tuition, student activity fee, student

government association fee, technology fee, university fee, capital outlay fee, private music lessons, school major fees, lab fees, special course fees, instructional support fees, dental kits, disability insurance, housing and dining services, communication fees, student health fee and study abroad fees.

Tuition and fees for preregistered students, along with charges for housing and dining services where applicable, are due by the beginning of each semester. All other students will be billed after the registration period and should pay upon receipt of the invoice.

Students who have sufficient financial aid to cover their charges will not be sent bills. Students with current charges of \$100 or more are eligible to participate in the university's Installment Payment Plan, offered during the fall and spring semesters. The Installment Payment Plan distributes the cost of tuition, fees, room and board, and communications fee for the semester into four equal installments. The fee per semester is \$25, paid with the first installment. An application and information about how to sign up for the payment plan will be included with the bill.

## Drop vs. withdraw

Drop charges are removed to indicate that the student never attended the class. The student is not eligible to receive financial aid, and any financial aid already credited to the student's account based on the original course registration will be removed from the student's account, which may create a balance due to the university.

Withdraw results in the academic grade of "W." Charges are assessed and adjusted according to the University Refund Policy. Students may owe a balance to the university.

## Refund of tuition and fees

The official university tuition and fee policy, applicable for the fall and spring semesters only (excluding short courses), is outlined below. Refunds are calculated on a course-by-course (per-credit-hour) basis, disregarding the full-time cap amounts. Students who are enrolled full-time and withdraw from courses may not receive a refund.

- Students dropping/withdrawing from courses through the first week of class will be entitled to a 100 percent refund of tuition and fees.
- Students withdrawing from courses through the second week of class may be entitled to an 80 percent refund of tuition and the university fee.
- Students withdrawing from courses through the third week of class may be entitled to a 60 percent refund of tuition and the university fee.
- Students withdrawing from courses through the fourth week of class may be entitled to a 40 percent refund of tuition and the university fee.
- Students withdrawing from courses after the fourth week of class are not entitled to receive a refund of tuition and fees.

Students in off-campus courses are subject to the same refund policy as all other university students if the class is scheduled on the regular semester schedule. If the off-campus course is shorter or longer than the academic semester, the refund dates are adjusted accordingly at the request of the Off-campus Programs Office.

The refund policy and deadlines of the English Language Program (ELP) are different from the university's refund policy for academic courses. Details of the policy may be obtained from the English Language Program Office.

A full refund for Holiday Intersession will be granted if the course is dropped before 4:30 p.m. on the day of the first class meeting. Partial refunds are not granted.

A full refund for summer tuition and applicable fees will be granted if the course is dropped no later than the day following the first day of a given class. (This policy also is applicable if the class does not meet on two consecutive days.) Students reducing their academic course loads to fewer than full time (12 credits for undergraduates and nine credits for graduates) before the end of the last day to drop a course will be entitled to a refund of tuition and applicable fees reflecting the reduced course load. Partial refunds are not granted for the summer session. This same refund policy also applies to short courses offered during the fall and spring semesters.

Students who are financial aid recipients and withdraw from all courses prior to completing 60 percent of the semester are subject to the Federal Return of Title IV Funds Policy. For more details see Federal Financial Aid Refund Policy.

Refunds will be computed based on the actual withdrawal date certified by the Office of Records and Registration. Refunds will not be made to students who do not attend classes and have not completed the required withdrawal procedure. Refund processing may take approximately two to three weeks. Exceptions to this refund policy are made only in rare instances. Written application for an exception must be filed in the Student Accounting Department to the Refund Appeals Committee within three years.

Refer to the Residential Housing contract and Dining Services' "Terms and Conditions" for housing and dining services refunds.

Requests for refunds that are not generated from the overpayment of financial aid should be made in writing to: VCU Student Accounting Department, P.O. Box 843036, Richmond, VA 23284-3036. Refund request forms are available at the Student Services Centers, 827 W. Franklin St., Room 104 or 1101 E. Marshall St., Room 1-055.

In accordance with credit card regulations, the university will refund any credit balance that may result on a student's account as the outcome of a credit card payment back to the credit card account. The remaining credit balance, if any, will be refunded to the student.

Students are responsible for paying any increase in charges that may occur after the generation of any refund.

### Outstanding charges

Students who fail to meet payments when due will be assessed late payment penalties and will be denied registration for future classes until they have paid all accrued amounts owed. Students with balances owed to the university will not be issued degrees, official transcripts of grades or graduate reports until all charges are paid in full.

Any communication disputing an amount owed, including an instrument tendered as full satisfaction of a debt, must be submitted to the Director of Student Accounting, Student Accounting Department, Virginia Commonwealth University, P.O. Box 843036, Richmond, VA 23284-3036.

Pursuant to Section 2.2-4805 et seq., of the Code of Virginia, and in accordance with rules and regulations promulgated by the State Comptroller and Attorney General of the commonwealth of Virginia, VCU will charge interest, costs and fees on all accounts past due.

VCU is participating in the Virginia Set-off Debt Collection Act of 1981. Under the provisions of this act, a Virginia individual income tax refund will be subject to the university's claim for unpaid balances of tuition and fees.

A student who pays a past due balance with a dishonored check may be subject to having his or her current and/or future registration cancelled. A

charge is levied for all dishonored checks.

### Defense crisis tuition relief, refund and reinstatement guidelines

These guidelines apply to any operation, including a defense crisis, in which the president of the United States declares a sudden mobilization that includes members of the Virginia National Guard or the active or reserve forces of the U.S. Armed Forces who are students enrolled at VCU. Students are offered the following enrollment secession options:

1. Drop all courses before the end of the add/drop period and receive a full refund of all funds paid the university. Students will be asked to sign the drop request form with the registrar indicating that they are not receiving a financial aid refund. (This option might best meet the needs of students who are called to active duty service during the first week of school and did not receive a financial aid refund check or direct deposit.)
2. Receive a grade of Incomplete (IM – incomplete military) in one or all courses. Students residing in university housing will be released from their housing and dining contracts and will receive a prorated refund of these charges. Students who chose to take a grade of IM will not have tuition and fees reduced for these courses because credits will still be earned for the semester. Students will have 12 months from the date that they leave the university to complete the course work and earn a course grade. (This option might best meet the needs of students who have essentially completed all course work in a class for the semester, but have yet to turn in a final project, an exam or other materials. It should be agreed upon between the instructor and the student that the remaining course work can reasonably be completed during the upcoming 12-month period.)
3. Accept administrative withdrawal (WM – withdrawal military) from all courses as of the effective date of the orders to active duty. If this option is elected, a full refund of all tuition, fees and prorated room/dining charges will be made. If a student received financial aid, the amount recovered to the financial aid accounts will follow Title IV guidelines. (This option might best meet the needs of students who are called to national service in the middle of a semester and have not completed 90 percent of their class requirements. This option also might best meet the needs of students who are leaving the university during the first week of class and received a financial aid refund check or direct deposit as a result of their financial aid.)

### Leaving the university

To initiate this process, the student must provide the university registrar with a copy of his/her active duty orders in addition to a printed copy of his/her course registration for that semester and indicate Option 1, 2 or 3 for each course. The university registrar will take the appropriate enrollment action, post the appropriate grades and send a copy of the orders and a copy of the student course request statement to the director of financial aid and the director of student accounting.

### Returning to the university

If the student returns within one year of completing their national



emergency service requirement, the student may return to the university in the same program of studies without reapplying for admission. The student should begin the re-enrollment process by writing to the director of admissions regarding their intent to re-enroll.

### **Tuition determination and student classification**

Tuition is determined by the number of credit hours a student is taking, the student's residency classification, course of study and classification level.

### **In-state residency**

Eligibility for in-state tuition benefits is determined by Section 23-7.4 of the Code of Virginia. Refer to the Determination of Student Classification for In-state Tuition Purposes in the [Welcome](#) section of this bulletin for the complete code.

All applicants to VCU who want to be classified as Virginia residents must complete the Application for Virginia In-state Tuition Rates included in the graduate application. The residency determination of the applicant will be conveyed at the time of admission. New students who have been classified initially as non-Virginians for tuition purposes may request a review of the initial residency determination by contacting Records and Registration/Residency, (804) 828-0366. The residency officer may request that the applicant complete a Student Supplemental Application for Virginia In-state Tuition Rates and submit supporting documents for additional clarification. Continuing students who want a change of residency status to in-state tuition rates must submit the supplemental application along with supporting documentation. Requests and applications for a second review must be submitted to the residency officer by the last day of add/drop week for each semester; however, it is strongly recommended that applications be submitted by the appropriate deadline: fall semester, Aug. 1; spring semester, Dec. 1; summer session, May 1.

Students will be notified by mail of decisions regarding residency status. The Office of Financial Aid and the Student Accounting Department also will receive official notification of residency decisions. Any denial for a change in residency status will include procedures for appeal of the intermediate decision. Students who submit fraudulent applications, falsify documentation or conceal information will be subject to reclassification, payment of all nonresident fees owed and university discipline.

### **Professional programs general academic regulations**

The bulletin of record for a professional student is the Professional Programs Bulletin in effect at the time of the student's official admission to the degree program (as specified in the student's official letter of admission). The effective bulletin contains the official requirements that the student must complete to earn the degree. A student who does not maintain continuous enrollment must reapply to the program and will be subject to the requirements of the bulletin in effect at the time of readmission. Exception to this policy must be approved by the student's dean or dean designee.

### **Course interpretation**

A single number listing for a course, such as MGMT 648, indicates that it is a one-semester course and may be offered each semester or only one semester each year.

Courses listed with a double number, such as THEA 603, 604 and designated as semester courses, consist of two one-semester courses, either semester of which may be taken without the other.

Courses listed with a double number, such as APPM 575-576, are designated as continuous courses and consist of two one-semester courses, the first of which can be taken without the second, but the second

of which cannot be taken without the successful completion of the first. The university reserves the right to withdraw any course or program.

### **Course listings**

#### **Identification of symbols**

I	A course offered in the first semester
II	A course offered in the second semester
I, II	A course offered in each semester
I and II	A course continued through two semesters
S	A course offered in summer sessions

### **Course numbering**

All schools and programs within VCU use the following course numbering system. All course numbers consist of three digits (XXX). The first digit relates to the course level as follows:

### **0XX noncredit courses**

Courses offered for students to make up deficiencies in previous training or to improve certain basic skills.

### **1XX and 2XX undergraduate, lower level**

Courses with these numbers are offered primarily for undergraduate students and may not be used for graduate credit, although graduate students may be required to register for courses at this level to gain a necessary foundation for other course work.

### **3XX and 4XX undergraduate, upper level**

Courses offered for advanced undergraduates and that usually constitute the major portion of specific program work leading to the baccalaureate degree. On occasion, graduate students will be advised by their graduate advisers to enroll in prerequisite 4XX courses. Graduate programs can require that 400-level courses be taken, but credit hours in these courses cannot count toward the graduate degree or in the graduate GPA (effective fall 2004).

### **5XX introductory graduate courses**

Graduate students enroll for credit in these courses through the normal graduate advising system. Departments may limit the number of 500-level courses applicable to a graduate degree program. Advanced undergraduates may enroll in these courses for credit with consent of the offering department. Credit is applicable toward only one degree unless a student is admitted to a course of study that allows a defined number of shared courses.

### **5XX professional graduate courses**

First year, first professional (medicine, dentistry, pharmacy and physical therapy) courses normally open to students enrolled in the M.D., D.D.S., Pharm.D. and D.P.T. programs. Certain courses of this group may be designated by the department and approved by the University Graduate Council for graduate credit.

### **6XX, 7XX and 8XX graduate courses**

Graduate students enroll for credit in these courses through the normal graduate advising system. Credit is applicable toward only one degree unless a student is admitted to a course of study that allows a defined number of shared courses.

### 6XX and 7XX professional graduate courses

6XX Second year, first professional (medicine, dentistry, pharmacy and physical therapy [second and third year]) courses normally open only to students enrolled in the M.D., D.D.S., Pharm.D. and D.P.T. programs. Certain courses of this group may be designated by the department and approved by the Graduate Council for graduate credit.

7XX Third and fourth year, first professional (medicine, dentistry and pharmacy) courses normally open only to students enrolled in the M.D., D.D.S. and Pharm.D. programs. Certain courses of this group may be designated by the department and approved by the Graduate Council for graduate credit.

### Grade review procedure

If a student thinks that a grade is inaccurate, the situation should be discussed with the faculty member. This will allow the faculty member to explain how the final grade was determined and, if an error is detected, to submit a change of grade.

If the student still thinks that the grade was assigned unfairly, a written appeal should be submitted to the department chair. Upon receipt of the written appeal, the department chair shall provide the student with a copy and explanation of the Grade Review Procedure and shall ensure that the requirements of the Grade Review Procedure are followed.

If the department chair is unable to resolve the complaint, then the dean of the school in which the course was offered will form a grade review committee as described in the Grade Review Procedure policy and will submit its decision to the dean of the school. The decision communicated by the dean of the school in which the program resides is the final decision and will be distributed to the student, faculty member(s) and department chair.

In cases concerning grades awarded for the fall semester, the written appeal must be submitted to the department chair no later than 30 calendar days after the beginning of the following spring semester. In cases concerning grades awarded for the spring semester or summer sessions, the written appeal must be submitted no later than 30 calendar days after the beginning of the following fall semester.

### Grading system

Work quality is measured by the four-point grade system with the following equivalents:

Grade symbol and meaning	Grade-point value per semester credit
A	4.0
B	3.0
C	2.0
D	1.0
F	0.0
P/F (Pass/Fail)	0.0
PR	0.0
S/U (Satisfactory/Unsatisfactory)	0.0

All other grades are temporary, carry no credit and are not used in the computation of a GPA. Refer to the following pages for an explanation of the use of the grades of satisfactory and unsatisfactory in relation to thesis/dissertation/research classes.

The number of grade points earned is computed by multiplying the grade-point value for the letter grade by the number of semester credits for the course. As an example, a student receiving an "A" (i.e., four grade points) in a three-credit course receives 12 grade points.

The grades of accepted transfer courses are not included in the computation of the VCU GPA. Graduate students are not designated as special honors graduates (i.e., cum laude, magna cum laude, summa cum laude) on transcripts or diplomas upon completion of their programs.

No graduate student shall be awarded degree credit for remedial work. Students advised to take any level course for remedial work should be notified in writing that the course credit shall not apply to the degree they are pursuing. Other bodies may rule later, should the student wish to apply the credit to some other degree.

### Grade of audit (AU)

Class size permitting, students may register for courses on an audit basis. A student may register for audit only during add/drop and late registration periods as a new registration and not as a change from credit to audit. Auditing a course means a student enrolls in a course, but does not receive academic credit upon completion of the course. A student who registers on an audit basis is subject to attendance regulations of that class and may be administratively withdrawn by an instructor for a violation of class requirements for audit students, before or after the normal eight-week withdrawal deadline. A student who registers for audit may be subject to other course requirements at the discretion of the instructor. Audit students are charged the regular rate of tuition and fees. An audit course is counted as part of the student's semester load in terms of classification as a full-time student. Courses taken for audit, however, do not satisfy minimum enrollment requirements for students receiving graduate teaching or research assistantships, graduate fellowships, or university graduate scholarships.

### Grade of continued (CO)

The grade of "CO" may be assigned as an interim grade for those courses that run over several grade reporting periods. The "CO" indicates that the course is not expected to be completed in a single semester and that students must reregister for the course. Upon completion of the course, a final grade will be assigned to the current semester, and the previous "CO" grade(s) will remain. This grade may be assigned only in courses approved for such grading.

### Grade of incomplete (I)

If because of circumstances beyond their control, students are unable to meet all the requirements of a course by the end of a semester, the mark of incomplete ("I") may be given. The awarding of a mark of "I" requires an understanding between instructor and student as to when and how the course will be completed. This understanding must be recorded on an Incomplete Grade Assignment Form that is submitted instead of a final course grade. The maximum time limit for submission of all course work necessary for removal of an incomplete is the end of the last day of classes of the next semester following the semester in which the incomplete was incurred (i.e., an incomplete awarded in the fall semester must be converted by the last day of classes in the spring semester, and an incomplete awarded in the spring or summer session must be converted by the last day of classes in the fall semester). At that time, an unremoved grade of incomplete is changed automatically to a failing grade. Individual departments and schools may have more stringent time limits. An extension of the time limit is possible, but must be approved, prior to the expiration date stated above, by the instructor and the dean of the school through which the course is offered. Written approval indicating

the new time limit must be filed with the dean.

### Grade of pass (P)

This grade is awarded for certain courses to denote satisfactory completion of requirements. Courses assigned the grade of "P" will not be computed in the GPA.

### Grade of progress (PR)

The mark of "PR" may be assigned only in courses approved for such grading. Unlike the mark of "I," "PR" will not automatically be changed to a failing grade at the end of the succeeding semester.

### Grades of satisfactory (S), unsatisfactory (U) or fail (F) in research, thesis and dissertation courses

All research, thesis, and dissertation credits taken as part of the final project (thesis/dissertation/project) for awarding a graduate degree are to be graded each semester as "S," "U" or "F." There is no limit to the number of these credits a student may take while pursuing completion of the degree as long as the student receives a grade of "S" for each credit. An individual department may terminate a student who does not progress satisfactorily as indicated by a "U" grade in research, thesis/dissertation/project course work. A student who receives a final grade of "F" in the thesis or dissertation will be terminated from the graduate program.

### Grade of withdrawn (W)

The grade of "W" indicates that the student has officially withdrawn from a course or has been administratively withdrawn for nonattendance. No student who has officially withdrawn from a course or who has been administratively withdrawn for nonattendance may attend subsequent meetings of the course.

### Immunization requirements

VCU requires that all full-time students supply validated immunization records to University Student Health Services. This requirement must be completed prior to registering for a second semester. Failure to meet these state law requirements will result in a hold placed on the student's second semester registration. The hold can be removed only upon receipt of the student's documented records.

The immunization record must be completed fully and accurately and also must be accompanied by documentation that the vaccines were given. This completion may be done in several ways. For example:

1. students may have their physicians transfer the information from their medical records and sign the forms verifying their accuracy, or
2. students may complete the forms using information received from their local health departments or from the armed services, but they then must attach validated copies of supporting documentation.

Many high schools require validated immunization records from students. If students recently have graduated from high school, their immunization records may still be available. They may request that the high school provide them with a copy of their immunization records.

If students cannot provide documented evidence of full immunization

according to VCU guidelines, then the students must see their family physicians or health departments and receive updated immunizations. Most city and county health departments offer immunization clinics (Richmond City Health Department, 500 N. 10th St., Room 114).

Immunity to the following diseases must be documented as specified on the forms supplied by the Graduate School with the formal offer of admission.

**Tetanus.** Documentation of (1) is requested. Documentation of (2) is required. (1) Primary immunization series, including month/day/year of each dose, and (2) Tetanus/diphtheria (Td) booster (month/day/year) within the past 10 years.

**Diphtheria.** Documentation of both (1) and (2) is requested. (1) Primary immunization series, including month/ day/year of each dose, and (2) Tetanus/ diphtheria (Td) booster, including month/day/year within the past 10 years.

**Polio.** (1) Primary immunization with a total of three doses of OPV (oral Sabin) or (2) primary immunization with a total of four doses of IPV (injected Salk). Note: Documentation of prior vaccination against polio, including month/day/year of each dose, is requested; however, if not completed in the past it is not recommended that the student complete the primary polio series unless the student is less than 18 years old or is planning travel to an area endemic or epidemic for polio.

**Rubeola (Measles).** Documentation of one of the following is necessary: (1) Born before 1957 and, therefore, considered immune, (2) two doses of the measles vaccine both administered after 1967 and given after the first birthday at least one month apart (document month/day/year), (3) physician's certification of diagnosis of measles including month and year of occurrence, or (4) documentation of immune titer proving immunity. Note: Measles vaccine given before 1968 is not acceptable.

**Mumps.** Documentation of one of the following is necessary: (1) mumps vaccine given after age one, month/day/year documented, (2) copy of report of immune titer, proving immunity, (3) physician's certification of diagnosis of mumps, including month and year of occurrence or (4) birth prior to 1957 (presumption of immunity).

**Rubella (German Measles).** Documentation of one of the following is necessary: (1) Rubella vaccine given after one year of age (document month/day/year) or (2) copy of report of immune titer proving immunity. Note: A history of disease is not acceptable. Rubella vaccine given before June 9, 1969 is not acceptable.

**TB Skin Test** (ppd) must be performed at University Student Health Service Office once student is attending classes.

**Meningococcal vaccine** is recommended to freshmen students residing in dormitories. The vaccine is available to any student wishing to reduce their risk for the disease.

Students with questions should contact the immunizations staff of University Student Health Service.

Students should refer to the appropriate professional program dean's office for information on other immunization requirements.

MCV Campus  
VMI Building, 1000 E. Marshall St., Room 305  
P.O. Box 980201  
Richmond, VA 23298-0201  
(804) 828-9220

### MCV Campus programs

Warning, probation and suspension are defined by the program of study.

Consult program adviser for further details.

### University rules and procedures

Each member of the VCU community has certain responsibilities, rights and privileges. These are stated in some detail in the VCU Rules and Procedures, and all students are responsible for being familiar with provisions of this document. The rules and procedures are printed in the campus calendar and also are available at the Office of the Dean of Student Affairs. This document also provides for the process whereby disciplinary action, including separation from VCU, may be taken against a member of the university community as a result of behavior that is in violation of the prohibited conduct as stated in the VCU Rules and Procedures.

Students at VCU have a right to appeal actions of an academic nature. If such action involves a course grade, the Grade Review Procedures should be followed. If such action involves computing, the Computer Ethics Policy should be followed. If such action involves dishonesty, the Academic Integrity Policy for Monroe Park Campus students should be followed.

All students enrolled in courses on the MCV Campus are subject to the VCU Honor System. Copies of the Honor Code are available in Office of Records and Registration, Sanger Hall, Room 1-055, and the Office of the Associate Dean of Student Affairs, MCV Campus, Bear Hall, Room 104.

In addition to those standards of conduct described in VCU Rules and Procedures and the MCV Campus Honor Code, which applies to all students enrolled on the MCV Campus, a student enrolled at the university may be dismissed from the school in which enrolled for failure to meet prescribed academic program requirements. Students appealing termination from a graduate program/department should first pursue appeals at the department and/or the school level. After receiving a decision from the department and/or school, a student has the option of filing an appeal with the dean.

VCU seeks to foster insight, imagination, creativity, resourcefulness, diligence, honesty and responsibility as well as the education of the men and women enrolled in its graduate programs. Such an enterprise can take place only where the highest standards of academic integrity exist.

Academic dishonesty is the giving, taking or presenting of information or material by students with the intent of unethically or fraudulently aiding themselves or others on any work that is to be considered in the determination of a grade or the completion of academic requirements. Students in doubt regarding any matter related to the standards of academic integrity in a given course or on a given assignment should consult with the faculty member responsible for the course before presenting the work.

### Withdrawal policies

#### Leave of absence

Students may request a leave of absence from a program through written appeal to their advisers. The adviser will forward the request, following departmental governance procedures, along with a recommendation to the dean, who will respond for the university. Students who do not register for courses for more than one calendar year and who have not been granted a

leave of absence must reapply for admission to VCU and to the degree program.

### Withdrawal from the university

To withdraw officially from VCU, a student must submit a complete Official Withdrawal Form to Records and Registration before the end of the 10th week of classes. The Official Withdrawal Form is obtained from Founders Hall, Room 104, or Sanger Hall, Room 1-055. Failure to complete this form may result in the assignment of failing grades in all or some of the courses. The student's permanent academic record will indicate a grade of withdrawn ("W") for all courses in which the student was enrolled.

### Health-related withdrawals

While students are expected to work toward completion of their degrees without interruption, health-related problems may necessitate withdrawal from the university.

- Some schools require a statement from a physician indicating the nature and severity of the condition, when a student should stop attending classes, and the estimated date of return to school.
- In the event that a student's health problem poses a danger to the student, to patients or to others with whom the student may come in contact and the student is unable or refuses to initiate steps to withdraw as stated above, administrative withdrawal of the student may be made by the dean upon consultation with the appropriate faculty and a qualified physician.
- Because curricular and course content changes may occur and a student's progress toward a degree may be affected adversely because of an extended absence, specific time periods may be imposed by individual schools with respect to the length of time allowed for absence from school. If there is a delay in return beyond the allotted time period without written consent of the dean, the student may petition for return with advanced standing.
- Some schools require that prior to return to school, the student must submit to the dean a statement from a physician. This statement should document that the condition that necessitated the withdrawal has been corrected to a point where the student can complete successfully all curriculum requirements with reasonable accommodation including classroom, laboratory, clinical and fieldwork experience.

### Dietetic internship

A postbaccalaureate, accredited dietetic internship is offered through the VCU Health System's MCV Hospitals. Qualified applicants must have completed an undergraduate or graduate program in dietetics. For additional information contact the Dietetic Internship Director, MCV Hospitals, Virginia Commonwealth University Health System, P.O. Box 980294, Richmond, VA 23298-0294.